



# THE UNIVERSITY OF LEEDS

## Postgraduate degrees and diplomas

**Research degrees** Facilities are available for the pursuit of full time or part time supervised research

**In selected disciplines** Over 12 months full time or 24 months part time leading to the degrees of MA, MSc, MEd, MSc(Eng) or MSc (by research)

**In all departments** Over a normal minimum of 2 academic years full time (3 academic years part time) leading to the degree of MPhil (LLM in the Faculty of Law) Over a normal minimum of 3 academic years full time (4 academic years part time) leading to the degree of PhD

**Taught courses** The University offers the following schemes of advanced study (full time unless otherwise stated) to suitably qualified applicants

### MA

American Literature  
Anglo German Literary Relations\*  
Arabic  
Bibliography, Publishing and Textual Studies  
British Government\*  
British History\*  
Classical Civilisation  
Commonwealth Literature  
Cultural Studies\*†† (provisional)  
Development Studies  
Economic History\*  
Economic Statistics\*  
Economics†  
Education and Local History  
English Language and Medieval Literature  
English Literature  
English Literature and Education  
English Literary Studies – Renaissance to Restoration  
Greek  
Greek Civilisation  
Health Management Planning and Policy  
Health Services Studies\*  
History of Scientific Thought\*  
Human Geography\*  
Icelandic Studies  
Latin  
Linguistics  
Linguistics and English Language Teaching  
Linguistics and Foreign Language Teaching  
Local and Regional History\*  
Logic and Philosophy of Language\*  
Medieval Studies\*  
Modern English††  
Organisational Diagnosis and Change\*††  
Philosophy of Mind\*  
Physical Education\*  
Political Sociology\*  
Political Sociology of Development\*  
Religious Studies\*  
Roman Civilisation  
Social History of Art

### MA continued

Sociology  
Spanish\*  
Speech Sciences  
Theatre Studies  
Theology\*  
Transport Economics  
Victorian Literature

### MMus

Composition  
Musicology  
Opera Production  
Performance

### MBA

Management Studies

### MSc

Cardiovascular Studies  
Clinical Biochemistry\*  
Clinical Psychology  
Colour Chemistry  
Construction Engineering\*  
Economic Forecasting\*  
Engineering Ceramics  
Engineering Geology  
Environmental Pollution Control  
Exploration Geophysics  
Food Engineering  
Food Science  
Geochemistry  
Integrated Design of Chemical Plant  
Mathematical Education and Mathematics†  
Medical Physics\*  
Mining Geostatistics  
Pure Mathematics  
Statistics  
Steroid Endocrinology  
Textile Dyeing and Finishing  
Textile Science and Engineering  
Transport Planning and Engineering\*

### MEd

Adult and Continuing Education†  
Education†  
Physical Education\*

### MSc(Eng)

Civil Engineering in Hot Climate  
Tribology in Machine Design  
Tropical Health Engineering

### MPH

Public Health

### MMedSc

Clinical Psychiatry†  
General Practice

### MDS

Community Dentistry  
Dental Radiology\*  
Dentistry\*  
Orthodontics†  
Paediatric Dentistry\*  
Paedodontics\*  
Restorative Dentistry

### Postgraduate Diplomas

Clothing Technology  
Education (10 Schemes)  
English Studies  
Food Science  
Fuel and Energy  
Health Planning and Administration  
History and Philosophy of Science  
Icelandic Studies  
Linguistics  
Metallurgy  
Mineral Engineering  
Mining Engineering  
Phonetics of English  
Textile Industries  
Textile Design

### Key

- \* Available full or part time
- † Available part time only
- ‡ Subject to approval
- †† Provisional

### Further information

The University produces a Postgraduate Prospectus. Copies together with other relevant information and application forms are available on request from The Deputy Registrar (Postgraduate Admissions) The University, Leeds LS2 9JT

THE  
**STUDENTS' GUIDE**  
TO GRADUATE STUDIES IN THE UK  
1987

# Graduate Study in Edinburgh

The University of Edinburgh, founded in 1583, is now one of the largest Universities in Britain and can offer postgraduate training in most major subjects. It has 1,500 teaching and research staff in 150 departments and units. The range of research conducted in the University and in associated national research institutes is correspondingly diverse.

Through the main library and linked specialist collections, students have access to over 1.5 million volumes. The University can also offer a wide range of facilities through an advanced computer network.

The University attracts almost 1,300 full-time postgraduate students each year; some 400 of these come from overseas from nearly 100 different countries. Taught full-time postgraduate courses are available in the subjects listed below. Most of these lead to Diplomas (after 9 months' study), or Masters' degrees (usually after 12 months' study). Some courses are also available by part-time study.

African Studies · Ancient Near Eastern & Mediterranean Studies · Animal Breeding · Animal Health · Arabic & Islamic Studies · Archaeology or Classical Archaeology · Architecture · Art (History of) · Art Historical Studies · Astronomical Technology · Building Engineering (Structures) · Business Administration · Biochemistry · Biology (Botany, Genetics, Physiology, Zoology & Pharmacology) · Celtic Studies · Chemistry, Environmental · Christian Education · Christian Ethics & Practical Theology · Cognitive Science · Community Education · Community Health · Computer Systems Engineering · Ecclesiastical History · Economics, Quantitative · Education · Educational Psychology · English Language & Literary Stylistics · English Language Teaching · English Literature · English Studies · Fire Engineering · Genetics, Human · Geographical Information Systems · Geography · Hebrew & Old Testament Studies · History · Information Technology (Knowledge Based Systems) · Landscape Architecture · Landscape Studies · Law · Legal Practice · Legal Studies · Linguistics, Applied · Linguistics, General · Literature, Comparative & General · Medical Radiodiagnosis · Medical Radiotherapy · Medieval French Language & Literature · Medieval Languages · Microelectronic Systems, Design & Manufacture · Ministry · Music · Neuroscience · New Testament Language, Literature & Theology · North American Studies · Nursing Administration · Nursing & Education, Advanced · Oral Tradition & Ethnology · Persian Studies · Philosophy · Phonetics · Planning Studies (Developing Countries) · Physics · Physics & Technology of Amorphous Materials · Production Engineering, Advanced · Public Health (Animal Studies) · Psychiatry · Religious Education · Remote Sensing & Image Processing · Resource Management · Rural Science · Russian or Slavonic Studies · Scottish History · Scottish Studies · Seed Technology · Social & Public Policy · Social Anthropology · Social Work · Social Work Studies · Statistics · Systematic Theology · Theology · Tropical Animal Production & Health · Tropical Veterinary Medicine · Tropical Veterinary Science · Turkish Studies · Urban Design & Regional Planning

In addition, there are opportunities in most of the above and other subjects for research under supervision leading to the PhD (Normally prescribed period 33 months).

For a copy of the postgraduate prospectus or further information write to The Secretary to the University, University of Edinburgh, Old College, South Bridge, Edinburgh EH8 9YL.

UNIVERSITY OF EDINBURGH



Course advertisement

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THE

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# DENTS' GUIDE

DUATE STUDIES IN THE UK

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1987

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**CRAC**





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Telephone: 0223 354551

*Distributors for Australia and New Zealand*

The Dominie Group, PO Box 33, Brookvale, New South Wales 2100

Sometimes the masculine pronoun is used in the text where the reference might more accurately refer to both sexes. This is to avoid tortuous, repetitive sentence structure peppered with 'he' and 'she'. Unless otherwise specified, readers should construe the reference 'he' as applying equally to both sexes.

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# Heriot-Watt University

## Faculty of Engineering



## POSTGRADUATE COURSES AND RESEARCH 1987/8

The Faculty offers a wide range of postgraduate courses and opportunities for research. A *Guide to Postgraduate Study and Research* giving details of these is available from the Deputy Registrar, Heriot-Watt University, Chambers Street, Edinburgh EH1 1HX.

### Masters courses currently available

Acoustics, Vibration and Noise Control  
Building Services Engineering  
Construction Management (Building)  
Design and Manufacture  
Hydraulic Engineering  
Soil Mechanics  
Structural Engineering  
Highway Engineering  
Digital Techniques  
Electrical Power Engineering  
Information Technology (Conversion Course)  
Petroleum Engineering  
Modular Course (combined faculty course)

P/T \*  
P/T, F/T \*  
P/T, F/T \*  
P/T \*  
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P/T  
P/T, F/T \*  
P/T, F/T \*  
F/T \*  
F/T \*  
P/T, F/T \*

\* Postgraduate diploma course also available; F/T Full-time, P/T Part-time

### Research activities

The departments, together with their research activities, for which supervision is available for research, are listed below.

**Building:** Building technology; heating, ventilation and thermal insulation; construction management; building economics; wind effects on buildings; acoustics and sound transfer; building maintenance; building services engineering

**Chemical and Process Engineering:** Offshore processing; high temperature processing; powder production; manne technology; dynamic wetting and air entrainment; enhanced oil recovery; continuous processing; process control, effluent and pollution control operation, grain drying

**Civil Engineering:** Materials, mathematical/physical modelling of structures and soils, full-scale testing, member/soil characteristics, dynamics of compliant floating systems in short-crested seas; estuarine dynamics; pavement engineering; engineering education

**Electrical and Electronic Engineering:** Advanced robotics, multi-sensor perception

systems; real-time intelligent control systems; image analysis; autonomous submersibles and sub-sea robotics; digital communications; computer architectures; microwave engineering; electrical power systems; power electronics.

**Mechanical Engineering:** Two-phase flow, flow in porous media; rotor dynamics; dynamic response to marine risers attached to floating vessels, vapour power cycles; boiling heat transfer; heat pumps; natural circulation of ducts; computer-aided engineering

**Offshore Engineering:** Single point moorings; dynamics of compliant structures; moorings, separated flow round bluff bodies; wind-wave interaction; laser Doppler techniques; wave and current loading on cylinders; environmental matters

**Petroleum Engineering:** Reservoir rock characterisation; reservoir and well damage studies; enhanced oil-recovery; multiphase flow of hydrocarbon systems; techno-economic study of offshore production systems; electrical properties of rocks; design of completion systems for deviated wells.

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# Preface for overseas students

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A significant proportion of the total number of graduate students in the United Kingdom is from overseas. There is great pressure on available resources and not all the demands made on them can be met. The fact that there are several types of institution in which graduate studies can be pursued may in itself pose a problem of choice for the overseas student and this may be further complicated by the introduction of new courses, the revision of syllabuses and the discontinuation of courses. The detailed guidance to graduate work given in this book is of great value to anyone wishing to begin a course of graduate study. In addition the following general statements may be of particular help to overseas students.

## Quality and diversity

There are means used to ensure that academic standards do not vary from department to department or from institution to institution. There is however considerable difference between universities and non university institutions in the range and orientation of graduate work offered. Universities traditionally offer facilities for graduate study over a wide range of disciplines directly related to the research interests of the academic staff. The chief constraints on the type of subject that might be studied at an advanced level, whether by means of courses or individual research, have usually been the availability of teaching and supervisory staff and the facilities the work required. More recently the growing complexity of knowledge in the principal areas of study and the emergence of new fields of investigation have required increased specialisation. No university can now cover all fields of study in depth. Graduate studies in non university institutions are largely of more recent origin and tend to concentrate on applied science, technology and social studies. Even within these fields they may concentrate on a limited number of specialisations.

## Polytechnics and other institutions

By concentrating their resources on specific areas of teaching and research the polytechnics are fulfilling the purpose for which they were established. The polytechnics derive their funds from local education authorities and their activities are related to local industrial and commercial needs. Polytechnics also offer part time and 'sandwich' courses which combine graduate study with commercial or industrial experience. Universities differ in that they are funded by a national body, the University Grants Committee; they are autonomous institutions and are more free to decide what courses to provide and the level at which they are to be developed. In spite of these differences it is worth noting that many university specialisations also derive from associations with local industry and that many universities aim to provide graduate courses related to a range of vocational demands and with more emphasis on applied than on pure academic research. The policies of the five research councils which finance much graduate research encourage this.

## Degrees: university and CNA

Another feature of this rather complex higher education system is the awarding of  
other  
non  
This  
Council is responsible for examining and approving the academic content of

proposed undergraduate and graduate courses of study in polytechnics, central institutions and higher education institutions; ensuring that the courses are comparable in standard with those of universities; and awarding degrees to those who successfully complete the course. Most courses leading to CNAA degrees are in polytechnics, but other institutions are also permitted to devise new graduate courses where there is a specific local demand for them.

### Research or coursework

The various sectors of the higher education system offer between them very extensive facilities for graduate study in most fields, and are able to match the special needs of most students. Moreover, there are opportunities for the student to pursue different types of study over different periods of time.

The two main possibilities are for research and for coursework. In the former, the student undertakes an agreed piece of original research under the supervision of a member of the academic staff. This research, which is expected to make a real contribution to existing knowledge in any subject, normally leads to a master's degree after two years, or to a doctor's degree after three or sometimes four years. Research students would normally be expected to relate their work to the specialist interests of departments or faculties in which they are working.

A degree by coursework involves regular attendance at lectures and seminars, and in most cases also the writing of a dissertation during part of the period of study. It normally leads either to a master's degree after one or two years, or to a diploma or certificate after nine to 12 months. However, in addition to long-term graduate studies of the types noted above, there are a number of 'post-experience' courses available in both university and non-university institutions. These may vary in duration from one week to six months or more, but normally do not lead to a recognised higher qualification; they provide training in a very specific field usually related to the applied sciences and the needs of industry, commerce or the professions. Courses less than six months in length are not included in *The Students' Guide to Graduate Studies*.

### Prospects for admission

In most years, the competition for places in graduate studies is keen and numbers of well-qualified applicants have to be disappointed though inevitably the pattern of demand varies in differing subject areas and from institution to institution. Candidates will normally be accepted only if they already hold a first degree of good class and show evidence of ability to work at advanced levels. Some institutions in addition require a master's degree as a prerequisite for admission to doctoral studies. It is also usual to expect that the first degree should be in the same area of knowledge as the proposed field of graduate study; but it has become accepted that graduate students may also need to study in new academic fields for which courses were not available at first-degree level (ergonomics, for example) or to take 'conversion courses' which enable a graduate to transfer from one discipline to another (for example, from a pure to an applied discipline). What is or is not possible can be discovered only by application to the chosen institution. The potential applicant is well advised to remember the great care taken to maintain consistent academic standards all over Britain, and to consider the facilities offered in smaller, newer universities, polytechnics and other institutions which may not be so widely known as larger, long-established places.

### Costs and scholarships

British graduate students are usually assisted by various government studentships and grants, principally by research council awards. Local education authority grants are also available, though these grants are mainly in the field of postgraduate teacher

training For the overseas student, there are many scholarships fellowships and other award schemes, including those offered by their own governments, by industry, by foundations, and by international organisations such as the United Nations The United Kingdom's Overseas Development Administration makes awards under various technical co operation schemes and the British Council also offers a number of scholarships each year Details of all the British award schemes can be obtained abroad from the local Representative of the British Council, or from the offices of the British Embassy or the High Commission Full time graduate study in Britain can be very expensive if the student does not have the benefit of an award of some kind The figures given here are the latest available they are for the academic year starting in September 1986 Expenses fall into three main areas travel to and from Britain, annual

cost of £630-£1,050 a year is estimated for a child On top of your basic living costs you

British Council Representatives are always able to advise intending students on the range of courses available in any particular field and on which course is likely to prove most suitable for the student's particular needs They can also provide a great deal of information on living conditions One of the most important problems for any student, particularly from overseas, is accommodation The British Council maintains offices in some university and polytechnic centres in Britain which can help certain categories of overseas students to find accommodation In London the British Council's Accommodation Unit can give advice to most full time overseas students

Information supplied by the British Council

# Postgraduate Study in



## Full-time

- Postgraduate Diploma in Video
- MA in Interior Design
- Postgraduate Certificate in Art and Design
- Diploma in Management Studies
- Postgraduate Diploma in Personnel Management
- Postgraduate Certificate in Education
- Art and Design, Music or Drama
- MSc/Postgraduate Diploma in Integrated Circuit and System Design
- MSc/Postgraduate Diploma in Microelectronics Engineering
- Postgraduate Diploma in Fuel Technology
- Postgraduate Diploma in Water Supply and Public Health Engineering
- Postgraduate Diploma in Social Work
- Supervised research for CNAAPhD and PhD degrees

## Part-time

- MA in History of Design
- Postgraduate Certificate in Art and Design
- Master of Business Administration
- Diploma in Management Studies
- Postgraduate Diploma in Personnel Management
- MSc/Postgraduate Diploma in Microelectronics Technology
- MSc in Water Pollution Control/Postgraduate Diploma in Air and Water Pollution Control
- Postgraduate Diploma in Fuel Technology
- Postgraduate Diploma in Geotechnics
- MA in Industrial and Social History
- Graduate Research Diploma in Humanities
- MSc/Postgraduate Diploma in Computer Graphics
- MA/Postgraduate Diploma in Deviancy and Social Policy
- MA/Postgraduate Diploma in Employment and Planning
- MA/Postgraduate Diploma in Conservation Policy
- MA in Political Economy
- Supervised research for CNAAPhD and PhD degrees

Post the coupon to: Admissions Enquiries (ref C216A), Middlesex Polytechnic, 114 Chase Side, London N14 5PN, England, or telephone 01-886 6599 (24 hour answering service)

Please send me details of ..... ☐ Full-time ☐ Part-time

Name \_\_\_\_\_

Address \_\_\_\_\_

C216A \_\_\_\_\_

**Middlesex  
Polytechnic**

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## Publisher's notes

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reference this is divided into four parts I Humanities and social sciences II

within each of the four parts Certain institutions have paid to have extended information played out from the computer file in which the parent book *Graduate Studies* is

courses Relevant displayed advertisements are cross referenced from the course listings Additional information can be gleaned from the displayed advertisements which appear elsewhere in the book

The book has a short section listing all institutions with postgraduate facilities For each the full postal address and telephone number are given and also the source of further information about postgraduate work

The background material in the introduction includes general advice about the implications of choice of subject and careers prospects and also information about financial support The detailed information is intended in particular for the guidance of students from overseas

It must be emphasised that *The Students Guide to Graduate Studies* is a wholly independent publication Although almost all information has been checked at source the amount and complexity of the material and the speed of production make it difficult to avoid error

It is essential that intending postgraduate students should consult the official publications of the institutions and research councils and in some instances the heads of

syllabuses outlined



# UNIVERSITY OF GLASGOW



## Graduate courses and research

Excellent facilities for research leading to master's degrees and doctorates are available in a full range of subjects within the departments of the University's eight faculties.

**Courses** of varying duration, from 6 months to 2 years, leading to diplomas! or degrees\* (MAcc, MAppSci, MArch, MBA, MEd, MEng, LLM, MMus, MN, MPhil, MPH, MSc, MSc(MedSci), MSc(SciEduc), MSc(VetSci), MTh, or MVM as appropriate) are also available in the following subjects:

### Natural and Physical Sciences

\*Applications of Radiochemistry in Inorganic & Surface Chemistry; \*!Applied Entomology; \*!Cartography; \*!Computing Science; \*!Digital Mapping & Automated Cartography; \*!Forensic Toxicology; \*!Experimental Parasitology; \*!Information Technology; \*!Marine Science; \*!Mathematics; \*!Photogrammetry & Remote Sensing; \*!Preclinical Science & Education; \*!Poultry Science; \*Science & Science Education; \*!Statistics; \*Surveying; \*Topographic Science.

### Engineering

!Aeronautical Engineering; \*!Building Services Engineering (part-time only); \*!Civil Engineering; \*!Desalination Technology; !Electronics & Electrical Engineering; \*Engineering Management (*part-time only*); !Mechanical Engineering; !Naval Architecture & Ocean Engineering; \*!Optical Information Technology.

### Humanities and Theology

\*!Adult Education; \*!Architecture; \*Art History; \*!Biblical Studies; \*Celtic Archaeology; \*!Church History; \*Classics; \*Education; \*Educational Studies; !Educational Psychology; \*Educational Psychology & Child Guidance; \*English & Hispanic Studies; \*English Language; \*English Literature; \*French Fin-de-Siecle World, Literature, Art & Aesthetics; \*French Theatre Studies (Contemporary); \*History; \*Medieval Studies; !Ministry; \*!Modern English Language; \*Music; \*Philosophy; \*!Practical Theology; \*Renaissance European Literature; \*Scottish Literature; \*Slavonic Languages; \*!Theology.

### Legal, Financial and Social Studies

\*!Accountancy; \*Applied Population Analysis; \*Business Administration (*part-time only*); \*Comparative Politics; \*Comparative Regional Analysis; !Development Policy; \*Economic Development; \*Economic Planning; !Geography; \*!Housing Studies; \*Human Rights; \*Industrial Relations; \*International Finance; \*International Financial Management; \*International Law & Development; \*!Latin American Studies; \*Law; \*Management Studies (*part-time only*); \*Monetary Economics; \*Political Philosophy; !Roman Law; !Russian Language for Social Scientists; \*Slavonic Languages; \*Scottish Government & Administration; \*!Socialist Theory & Movements; \*Sociology; \*!Soviet & East European Studies; \*!Town & Regional Planning; \*Urban Policy.

### Human and Veterinary Medicine

\*Anaesthesia; \*Anatomy; \*Clinical Pharmacology; \*Clinical Psychology; \*Dermatology; \*!Forensic Medicine & Science; \*General Practice; \*Haematology; \*Medical Cardiology; \*Medical Genetics; \*Medicine; \*Nursing (*part-time only*); \*Nutrition; \*Ophthalmology; \*Oral Medicine; \*Oral Microbiology; \*Oral Pathology; \*Oral Surgery; \*Orthodontics; \*Pathology; \*!Poultry Science; \*Prosthodontics; \*Public Health; \*Surgery; \*!Veterinary Medicine.

Further information is available from:

The Registrar, University of Glasgow, Glasgow G12 8QQ, Scotland.  
Telephone: 041-339 8855. Telex: 777070.

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# Postgraduate studies

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degree and an interest in his subject who is happy with academic life it holds obvious attractions in particular that of leading to a postgraduate qualification which should enhance employment prospects

The prospective postgraduate student should, however, consider recent developments in approach and availability of postgraduate work. Opportunities to undertake highly specialised research for its own sake are becoming relatively scarce. Employers are concerned that postgraduate training should be relevant to industry, to commerce and to society in general, this should be taken into account when deciding whether to work for a postgraduate qualification and on the type of qualification that would be most appropriate

## **Arts and social sciences**

The changing direction of research is reflected in the number of courses orientated towards the specialist needs of non academic employers. Arts graduates and graduates in the non vocational social sciences have inevitably few courses of this type. Courses in the practical applications of language studies are among the most relevant

The emphasis on applied research is marked in facilities and courses outlined in the social sciences chapters in particular in economics, management and business studies and psychology. There has been development in interdisciplinary graduate courses of this type for instance, in development studies, communications and tourism

Graduates in arts and social sciences should keep in mind the possibility of changing discipline. Computing and accountancy are areas in which graduates in non science subjects are commonly accepted

Many postgraduate students in arts work for research degrees. In arts research is in general, done on an individual basis and it is often possible for a department to arrange supervision of a very wide range of topics not necessarily related to the research interests of any member of the academic staff. A high proportion of social sciences postgraduate students in British universities study in taught courses, primarily in social work or business studies

## **Sciences**

The development of applied research in science subjects is especially marked in engineering and technology, for the graduate in either of which there are several options. These include the traditional training in research for one or both of a master's degree and a doctorate, a specialist course for a master's degree or a diploma in the same discipline as the first degree or a related one, various forms of sponsorship including the sandwich course with varying amounts of time spent in employment and in research, and a period of employment gaining experience and a professional qualification before a return to academic life for specialist or research training. Opportunities exist in almost all universities and polytechnics and in some colleges of higher education

Postgraduate training in pure science has suffered severe setbacks over the last few years. However, science graduates are rarely restricted to their first-degree discipline for postgraduate work: if they take a course of study for an intermediate degree they can train in a discipline that is different from their original one. For example, chemists can specialise in chemical engineering or food technology. Institutions have increased the number of courses in these areas, tailoring them to the requirements of graduates from numerous disciplines and providing both for those who will go straight into industry and for those going on to PhD research training. Departments are attempting to combine their academic requirements with employers' needs. Scientific and technological research in general is tending towards emphasis on applied content, since finance for such work is more easily come by.

Settling for immediate postgraduate training that ends in a diploma or professional award instead of a higher degree does not preclude taking such a degree later. There are a number of awards available for master's degrees and doctorate training for people who have spent some time in employment first.

### **The structure of higher degrees**

A higher degree is the qualification normally awarded to graduates who have taken an advanced course of study and/or spent a period in supervised research, and have satisfied the examiners by passing a written examination or by presenting a thesis, or by a combination of both. Oral examinations are also commonly required; assessment by coursework is increasingly in use at postgraduate level. Generally the intermediate degree is that of master and the more advanced that of doctor of philosophy. The higher doctorate, with which this volume is not concerned, is generally awarded on the evidence of published work contributing substantially to knowledge. Normally a thesis for a doctorate is expected to be an original work displaying knowledge of the field combined with the exercise of critical judgement and containing material worthy of presentation as a definite contribution to knowledge. The grant-awarding bodies define research for a doctorate as 'training in research methods'. A thesis for a master's degree does not require the same standard of originality, such thorough literature searches or such a high critical content; it is, in fact, normally either a record of research undertaken (without any assessment of the implications) or a dissertation embodying a survey of the literature in the field of study concerned.

In the past, possession of the master's degree was taken to mean that the possessor was either on the way to a doctorate or had failed to achieve the required standard (except at those universities that award master's degrees after first degree studies). But in recent years a master's degree has in most institutions become an end in itself. This means an increasing number of set syllabuses tailored to meet the needs of specific areas of employment or advanced research, but still leaving the way open for the graduate to go on to a doctorate. Courses leading to master's degrees may also be taken by graduates without the required entry qualifications and candidates who do not wish to work to so high a standard; in such cases a postgraduate diploma is generally awarded.

### **Entrance requirements and periods of study**

Entrance qualifications for entry to study for all higher degrees are high and are made still higher by the shortage of grants or other financial support. The entrance requirements and the periods of study are laid down in individual institutions' regulations and are closely related. Extra periods of study or a qualifying examination may be required of candidates with less than the stipulated entrance requirements or a degree in a subject not sufficiently close to the proposed area of study; the

problem for those in this situation is not so much to gain admission as to find

register first for the master's degree or as a research student before permitting them to register retrospectively after a period of assessment for the doctorate. It is increasingly common practice for candidates for any research degree to be required to hold a master's degree by instruction and examination or to attend the course for the relevant master's degree before embarking on the period of research.

In most institutions it is possible to submit theses for higher degrees in the minimum time allowed by the regulations if the candidate's qualifications are good enough but this is not invariable. At many institutions it is theoretically possible to be admitted to the doctorate in two years but in practice this may be possible only in exceptional circumstances.

The period of study for a master's degree by instruction and examination is normally one year, commonly a full calendar year. Coursework for some of these degrees occupies only from the beginning of the academic year until the Easter vacation, the final term is usually spent on a research project and the summer devoted to writing it up. For others an academic year is spent on coursework and the following long vacation is spent on the research project and dissertation.

Many institutions permit candidates to work for higher degrees on a part-time basis, this is commonly taken up by candidates for research degrees. Timetabling problems make part-time courses more difficult although an increasing number of industrially orientated courses can be taken on a part-time or sandwich basis. A few institutions permit students to carry out part-time research only if they live within a reasonable distance, and a few offer part-time study to their graduate staff only.

### CNA A degrees

The Council for National Academic Awards is an autonomous body established by Royal Charter to award degrees and other academic distinctions comparable in standard with awards granted and conferred by universities. The Council can award degrees or diplomas to students who have completed courses of study at educational institutions other than universities and research degrees to those who have successfully carried out research work under approved conditions supervised either by an educational or research institution other than a university. The Council awards the following higher degrees: MA, MBA, MEd and MSc, MPhil and PhD for successful completion of approved programmes of supervised research, and also a diploma for successful completion of approved postgraduate courses.

Candidates must hold entrance qualifications similar to those stipulated by the universities. The minimum period of study for the master's degree by instruction and examination is one calendar year full-time and for the diploma 25 weeks full-time or

with an appropriate master's degree.

Candidates for research degrees must be sponsored by an educational, research, industrial or commercial institution and the application must be submitted to the CNA A by the director of that institution on behalf of the candidate. The Council's approval depends on factors such as the candidate's qualifications, the suitability of the proposed research project, the arrangements for supervision and the facilities available for the research. Further details and a copy of the *Directory of Postgraduate*

and Post-Experience Courses may be obtained from the Council's offices at 344-54 Gray's Inn Road, London WC1X 8BP

### External study

In *The Students' Guide to Graduate Studies* the phrase 'external study' is used in the sense that work for a higher degree is carried out outside the registering university. It is not to be confused with the arrangements that apply for external degrees of certain universities.

Perhaps one of the major factors that encourages graduates to carry out research for a higher degree at their graduating university is the fact that their university will grant them a degree on the evidence of research carried out elsewhere. However, a high proportion of universities have some arrangements for graduates of other universities to study externally for higher degrees. It is fairly common, for example, for PhD candidates to be able to spend a year away from the university; fewer universities permit candidates to carry out their entire research programme away from the university. Details should be obtained from the contacts given for each institution in the individual institution entries.

In all this the major factor is one of adequate supervision and whether the candidate is getting the necessary training in, for example, advanced research techniques. Most universities require adequate proof of this and try to ensure that candidates have good contacts with their university supervisors and are able to attend necessary courses and seminars. Arrangements for external study are usually only permitted to candidates whose arrangements and ability are individually approved by the relevant university.

The CNAA, of course, provides ideal conditions for research degrees to be taken while working.

### Affiliated research institutions

Beyond the usual postgraduate opportunities at universities there is a rich area of student opportunity at affiliated institutions funded by research councils and private bodies.

At the back of the book will be found a list of addresses of the affiliated research institutions in which there are opportunities for postgraduates to undertake research projects which may lead to higher degrees. Detailed information about the range of work carried out in them is available from the research councils whose addresses are in the Postgraduate awards section. Research students who work in these institutions must register with a university or with the CNAA for the award of a higher degree. Some universities have outlined work carried out at affiliated institutions in their entries describing research opportunities.

### Postgraduate study abroad

If you are interested in the possibility of studying in another Commonwealth country, consult the *Commonwealth Universities Yearbook*, published annually by the Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF.

For information about institutions in other parts of the world, the International Association of Universities in Paris publishes biennially the *World List of Universities*. It also publishes every three years the *International Handbook of Universities and other Institutions of Higher Education*. The Unesco publication *World Guide to Higher Education: a comparative survey of systems, degrees and qualifications* (Unesco Press, Paris) might also be worth consulting. For further information about postgraduate study in the USA, contact the US Information Service.

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# Postgraduate awards

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Brief details are set out below regarding the main sources of support for post graduate students. Information is correct at 31st January 1986. Prospective applicants should obtain further information for themselves regarding those awards for which they consider themselves to be eligible and should consult their tutors before applying.

## Agricultural and Food Research Council

The AFRC offers a limited number of awards annually. Up to 15 research student ships are available to enable graduates in science or veterinary studies to work for a maximum of three years for a higher degree at any of the institutes of the Agricultural and Food Research Service. The institutes are listed in the publication given at the end

made through the director of the institute(s) of the candidate's choice. Awards are at the standard postgraduate level for research council awards. There is a tax free maintenance allowance which is reviewed annually (the standard allowance for the academic

adjustment for instance a reduction on account of additional income above a certain

professional experience.

In addition up to four veterinary training awards are offered annually to enable veterinary graduates to undertake a formal one year course of instruction in a specific scientific discipline before embarking on a career in research on farm animals or to enable science graduates to undertake an approved course of instruction in a specific scientific discipline. Details regarding application and value of award are as above.

Full information is contained in the publication *Regulations governing Post graduate Awards* updated annually and available from Agricultural and Food Research Council, 160 Great Portland Street, London W1N 6DT, telephone 01 580 6655.

## Department of Education and Science and British Academy

The Department of Education and Science operates a bursaries scheme for students

Science. The value of the bursaries is comparable to undergraduate grants and there is a similar requirement for parental contribution according to income. Full details are given in the publication *Postgraduate Awards 1* in the series of guides to grants

available from the DES.

State studentships are offered for postgraduate study in subjects within the field of the humanities at universities and certain other institutions of higher education; they are available for certain courses of study and research leading to a higher degree, and for certain certificate or diploma courses not covered by the bursary scheme. State studentships are tenable for up to one year only; major state studentships may be held for up to three years. The studentships are administered by the British Academy. Details regarding eligibility and the amount of awards are similar to those for AFRC awards above. Full details are given in *Postgraduate Awards 2*, available from the British Academy at the address given below for the DES.

Postgraduate awards in information science are also offered by the DES. Research studentships are offered to students being trained in the methods of research and advanced course studentships are offered to students taking suitable postgraduate courses of instruction: details for the studentships are similar to those for AFRC awards above. 'Instant' awards are offered to those with at least one year's acceptable postgraduate experience in industry, and conditions are similar to those relating to the studentships. Full details of this group of awards are given in *Postgraduate Awards for Librarianship and Information Science*, available from the DES.

The publications listed and other information regarding postgraduate awards are available from the Department of Education and Science, Honeypot Lane, Stanmore, Middlesex HA7 1AZ; telephone 01-952 2366

#### Economic and Social Research Council

The ESRC makes awards for full-time postgraduate courses and research. The subjects within its scope are accountancy, area studies, computing applied to the social sciences, criminology, economic and social history, economic and social statistics including demography, economics, education, ethnology related to social anthropology, human geography, international relations, management and industrial relations, planning, political science, psychology, social anthropology, sociology, socio-legal studies and social administration. There is some overlap with the other research councils and the DES, particularly in history, area studies and socio-legal studies.

ESRC studentships are intended for support of postgraduate study for a higher degree, either by thesis or examination. They also cover some academic diploma and certificate courses, usually conversion courses for candidates intending to undertake postgraduate study who do not have a suitable academic background. Under the committee awards scheme, awards are allocated to departments for coursework, linked and collaborative research (closing date 1 June). Awards are also available through the student competition for coursework and research training (closing date 1 May). Details of eligibility and value are similar to standard research council awards; see AFRC section above.

Linked studentships may be available in certain subject areas: they are intended to link an on-going research project providing stimulus, guidance and data with the opportunity to gain a higher degree.

Bursaries are available for full-time postgraduate study on diploma or certificate courses of a vocational nature in business and management studies. Their value is the same as undergraduate grants, and they are subject to contribution by parents or spouse according to their income.

Full information is given in the publications *ESRC Studentship Handbook* and *ESRC Bursary Handbook*; these are available from the Economic and Social Research Council, Postgraduate Training Division, 160 Great Portland Street, London W1N 6DT; telephone 01-637 1499.

### **Medical Research Council**

The MRC provides grants for medically and non-medically qualified graduates who are working in the general field of medical research. This includes graduates in anatomy, physiology, biology, pharmacology, chemistry, biochemistry, psychology, physics, statistics and engineering.

Advanced course studentships are offered to enable science graduates to attend

relating to the awards are similar to those for AFRC awards above.

Research studentships are available to enable young graduates with good honours degrees in science to undertake research training in a subject relevant to medicine which is normally expected to lead to a higher degree (details are similar to those for AFRC postgraduate studentships above). Students are encouraged to undertake training at an institution other than the one at which they graduated.

Full details of these awards are available from the Medical Research Council (Training Awards), 20 Park Crescent, London W1N 4AL, telephone 01-636 5422.

### **Natural Environment Research Council**

The NERC offers awards for research or other postgraduate training in the scientific aspects of the natural environment, broadly defined as the solid earth: its physical properties and mineral resources, the inland waters and their living resources, the terrestrial communities: their resources and amenities, the seas and oceans and their living resources, and the atmosphere.

Research studentships are available to provide for the maintenance of well-qualified graduates being trained in the methods of research and working for a PhD. They are awarded for up to three years. Details of eligibility and value are as those for standard postgraduate awards offered by research councils (see AFRC section). Allocation of awards is made by nomination of heads of departments: the number of awards being fixed by a quota system, some additional awards are available for those unsuccessful in gaining a quota award. Most research students are based in universities and polytechnics but a few hold awards in government-funded research institutes, and some are trained jointly by academic institutions and industry, public authorities or research institutes and are awarded CASE Studentships (Co-operative Awards in Sciences of the Environment).

Advanced course studentships provide for the maintenance for up to one year of well-qualified graduates taking suitable postgraduate courses of instruction. Awards are tenable only on courses which have been listed as recognised by the NERC for the purposes of its studentship scheme. Details of eligibility and value are similar to those for AFRC studentships above.

Industrial studentships are offered to support those who have had considerable experience in industry and who are older than the usual candidates for a studentship. The studentships are intended to enable industrial scientists to obtain further training on suitable courses of instruction.

Full information is given in *NERC Training Awards*, obtainable from the Natural Environment Research Council, Polaris House, North Star Avenue, Swindon SN2 1EU, telephone Swindon (0793) 40101.



# TRENT POLYTECHNIC

*-The Key to your future*

Trent Polytechnic is one of the largest polytechnics with over 7,000 full-time and sandwich students and 3,000 part-time students. Of these around 830 are postgraduates.

The Polytechnic is situated right in the heart of England in the City of Nottingham—an attractive and lively city with first class sporting, cultural and recreational amenities. The Polytechnic is based on two sites, one in the city centre and the other on the outskirts of the city in a rural setting at Clifton.

The Polytechnic libraries house around 400,000 books and take over 2,500 periodicals. A well developed computing service is available to all students.

Trent Polytechnic offers taught courses leading to a number of postgraduate qualifications, these include:

**MASTER'S DEGREES:** MA Accounting & Finance (p-t), Economics (p-t), Fine Art (p-t), Knitwear & Knitted Fabric Design (f-t), Politics & Administration of the Modern State (p-t), MSc Computer Aided Engineering (p-t), MEd Primary Education (p-t).

**CERTIFICATES:** Postgraduate Certificate in Education (f-t), Postgraduate in Education (Craft, Design & Technology) (f-t), Certificate in Education for Teachers in Further and Higher Education (p-t).

**DIPLOMAS:** Administrative Management (f-t), Applied Social Studies (f-t), Accounting & Finance (p-t), Management Studies (p-t), Education Management (p-t), Further Education (p-t), Atmospheric Pollution Control (p-t), Health & Safety for Enforcement Officers (p-t).

**PROFESSIONAL QUALIFICATIONS:** Careers Guidance Diploma (f-t), Law Society Common Professional and Finals (f-t), Institute of Marketing Diploma (p-t), Institute of Purchasing & Supply Professional Stage (p-t), Mining Qualifications Board First Class Legislation (p-t).

**RESEARCH:** Supervision of research leading to MPhil and PhD degrees validated by the Council for National Academic Awards is available in the following areas: Accounting & Finance, Building & Environmental Health, Business & Management Studies, Civil & Structural Engineering, Computing, Economics & Public Administration, Education Studies, Electrical & Electronic Engineering, Fashion & Textiles, Fine Art, History & Geography, Industrial & Production Engineering, Legal Studies, Life Sciences, Literature & Languages, Mathematics, Statistics & Operational Research, Mining, Mechanical Engineering, Physical Sciences, School Technology Craft & Design, Social Studies, Surveying, 3-D Design, Town & Country Planning, Visual Communication.

**ACCOMMODATION:** The Polytechnic can provide accommodation for over 1000 students, with priority given to those in their first year at the Polytechnic. An Accommodation Service also exists to help students find suitable accommodation elsewhere in the city.

Further information is available in our Postgraduate Courses and Research Facilities Prospectus, available from Ms G Blaikley, Information Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Director: Professor J O'Neill BSc (Eng) C.Eng Telephone (0602) 418248. Telex 377534.

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Trent Polytechnic Nottingham



Nottinghamshire County Council

## Science and Engineering Research Council

SERC awards are made for research or other postgraduate training in science and

management courses

Research studentships provide for the maintenance of students being trained in the methods of research and usually working for a PhD. They are awarded for up to three years. Applicants must have at least upper second-class honours. Details of eligibility and value are similar to the standard for research council studentships (see AFRC above), closing dates for the different types of award are different. As with NERC studentships, a quota system applies.

Advanced course studentships provide for the maintenance of students taking

'Instant' awards are similar to research studentships but are not tied to a quota system, they are intended for candidates in employment who need an early decision

problems and people working in industry

Er

Nc

## Training Opportunities Scheme

The TOPS scheme aims to provide financial support for those who are seeking training for a career, it is particularly intended to help those without formal training, with outdated skills, or who wish to change their career. Those following certain postgraduate courses who are over 19 years of age and have spent two years away from full-time education may be eligible for support under the scheme.

TOPS awards cover fees and provide financial support. The awards are not affected by a wife's or husband's earnings. Amounts vary according to whether the student is home-based or not, and additional payments are made for dependants.

Full information is obtainable from local Job Centres, Employment Offices, or Training Service Division District Offices.

## Awards for Irish students

## Other awards

In addition to the awards outlined above, some postgraduate awards are available from  
Department of  
astle, London  
SW1P 3DY,

Ministry of Agriculture, Fisheries and Food, Great Westminster House, Horseferry Road, London SW1P 2AE; British Library Research and Development Department, Sheraton House, Great Chapel Street, London W1V 4BH.

Although the majority of postgraduate students are supported from public funds, it is possible to find financial support elsewhere. Funds from industry, commerce or university or college research contracts are tied to areas of research or study of relevance to the donor; few are likely to be available for arts students and not very many for social scientists. Individual institutions can make some awards themselves; details of such awards are available from the institutions. Charitable trusts provide a number of awards, generally for very specific purposes, or to particular groups of graduates. For example, the Carnegie Trust for the Universities of Scotland offers a number of fellowships and scholarships to graduates of Scottish universities and to members of staff in universities and colleges in Scotland.

Details of the various types of award tenable at universities in the United Kingdom and in other Commonwealth countries are given in *Scholarships Guide for Commonwealth Postgraduate Students and Awards for Commonwealth University Academic Staff*, which are published in alternate years by the Association of Commonwealth Universities (both available from the ACU, John Foster House, 36 Gordon Square, London WC1H 0PF).

Intending postgraduates are also advised to consult *Educational Charities: a Guide to Educational Trust Funds*, published by the National Union of Students; the *Directory of Grant Making Trusts*, published by the Charities Aid Foundation; and *The Grants Register*, published by Macmillan Press.

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# The postgraduate certificate of education

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Anyone who wants to embark on a career teaching in state schools needs O levels in English and mathematics.

have come through the PGCE route, which may be followed in universities, polytechnics, or colleges of higher education.

PGCE courses prepare students for teaching in primary schools or in secondary schools, or in age ranges within or across this division. At the primary level students can opt for courses specialising in either the 5-11 age range or the 7-11 age range.

Secondary school courses prepare students to teach the 11 to 18 age range. Some of the secondary courses allow specialisation in teaching in the post-compulsory sector of education from 16 years upwards, which can take place in schools, sixth form colleges, further education colleges or tertiary colleges. FE colleges and tertiary colleges are

education in the UK. Information on what is available at each training institution in England and Wales is listed in material obtainable from the Graduate Teacher Training Registry at 3 Crawford Place, London W1H 2BN. All courses on the GTTR list can lead, following satisfactory completion of a year's probationary teaching, to qualified teacher (QT) status, which is necessary for teaching in state schools and sixth form colleges. There are other initial teacher training courses open to graduates and non-graduates and specialising in further education at Garnet College and at Bolton Huddersfield and Wolverhampton Polytechnics.

Most students on secondary PGCE courses intend to teach their degree subject or subjects. The range of subject courses on offer broadly matches the subjects of the secondary school curriculum, except that training for some subjects, such as craft, design and technology, home economics, and physical education, is normally via a BEd degree. However, some institutions only offer one or two subjects while others offer

there is a shortage of applicants for training places and recently this has also applied to modern languages.

On many secondary courses it is also possible to take a second subject. This is important at a time of falling school rolls when head teachers need to maintain a balanced curriculum despite losing staff; the head's options are increased if staff can teach more than one subject. The degree of choice between second subjects is likely to depend upon the overall size of the course in a particular institution; it may include such areas as special needs, careers education or pastoral care. Apart from falling rolls, many changes affecting secondary education demand increasing flexibility on the part of the teacher. The new GCSE examination, the one-year Certificate of Pre-vocational Education for 16-17 year olds, and the government's Technical and Vocational Initia-



# University of Leicester School of Education

With over 300 PGCE students, the Leicester School of Education organises one of the largest one-year initial teacher training courses in the country. This means that a wide variety and choice of course is available.

**Postgraduate Certificate in Education** courses offered include the following

a) A **Primary Course** offering two age specialisms Early Years (age 3 – 7 years) and Junior Years (age 7 – 11 years), and also an Educational Psychology tutorial group

b) A **Secondary Course** which specialises in

English  
Teaching English to speakers of other languages  
Integrated Humanities  
Geography  
History  
Social Sciences

Mathematics  
Modern Languages  
Science  
Chemistry  
Biology  
Physics

Also within the Secondary Course is a tutorial group in Communication Studies in Further Education

All these courses are 36 weeks long and are firmly school-based. Work in partnership schools and IT-INSET programmes forms a central part of the experience. There are two teaching practices, which are undertaken in two sorts of school/college, of which there is a wide variety in Leicestershire. Practising school teachers play a key role in the courses. The courses have three major components – school experience, curriculum studies and the study of educational theory relevant to classroom practice.

*Further information from:*

**PGCE Office, University of Leicester School of Education, 21 University Road, Leicester LE1 7RF**

## University of Warwick

### FACULTY OF SOCIAL STUDIES

**Academic Departments and Schools:** Applied Social Studies; Economics; Interdisciplinary Women's Studies; International Studies; Industrial and Business Studies; Law; Philosophy; Politics; Psychology; Sociology.

**Research Centres:** Centre for Research in Ethnic Relations; Development Economics Research Centre; Industrial Relations Research Unit; Institute for Employment Research; Institute for Management Research and Development; Legal Research Institute; Macroeconomic Modelling Bureau; Nursing Policy Studies Centre.

**Research Degrees:** LLM; MA; MSc; MPhil; PhD

**Taught Postgraduate Degrees:** \*LLM; LLM Law in Development; Law in Society.

**MA** \*Applied Social Studies; Continental Philosophy; \*Economics; Industrial Relations; Interdisciplinary Women's Studies; \*International Studies; Philosophy; Philosophy and Literature; \*Politics; Race Relations; \*Sociology of Labour; \*Sociology of Education; \*Sociological Research in Health Care.

**MBA**  
**MSc** Cognition, Computing and Psychology; Management Science and Operational Research; Psychotherapy.  
**PhD** Economics.

\* = Postgraduate diploma also offered.

**Awards:** The University offers nine postgraduate awards open to all four faculties. The Faculty of Social Studies has been successful in attracting ESRC and SERC awards for research and taught courses: 74 students currently hold research council awards. Additionally there are a number of endowed and sponsored awards and 32 DHSS awards are held by students in Applied Social Studies.

Further information from the departments listed above or **The Academic Registrar, University of Warwick, Coventry CV4 7AL**

tive, are just some of the current developments demanding new skills which require attention within PGCE courses

Students on primary PGCE courses are prepared for the generalist role of class teacher, responsible for all areas of the curriculum, particularly language and mathematics, but also able to make a special contribution by exploiting his/her own academic strength. It follows from this last requirement that training institutions look for some correspondence between a student's degree subject(s) and areas of the primary school curriculum, but a candidate's personal qualities and breadth of experience are also important at the selection stage. One year is a short time for teacher

tions expect candidates to have spent some time in a primary school prior to interview so that they are aware of the realities of the situation

Both primary and secondary PGCE courses involve three main elements: curriculum or method work, professional education studies and school experience. The labels and the extent to which the elements are integrated may vary but school experience is increasingly seen as the main integrating element. School experience includes both observation and teaching practice and may involve day release, part week and block periods of time. Some courses place students mainly in one school during the year, others provide experience in two or three. Patterns of school experience vary but there is a tendency for the final assessed teaching practice to be in the spring term for secondary courses and in the summer term for primary courses.

Curriculum studies cover the part of the course concerned with the subject students intend to teach. Professional education studies include studies of the disciplines of the history, philosophy, psychology and sociology of education and studies of the classroom skills needed by the teacher. In some courses there may be discrete components within professional education studies, in others there is greater integration reflecting a shift in concern from the academic disciplines themselves to their relationship to the practicalities of the classroom situation. Assessment of the theoretical elements of PGCE courses is now normally by continuous assessment.

The number of PGCE places offered by a training institution varies from less than 40 to over 200. Some specialise in primary or secondary training while others do both.

courses in colleges and polytechnics. Nowadays all courses are subject to scrutiny by the government, anxious to boost teaching quality, through Her Majesty's Inspectorate (HMI) and the Council for the Accreditation of Teacher Education (CATE).

year PGCE course cannot convert a graduate into a fully fledged teacher. It offers an initial training course designed to equip the student to operate effectively in the classroom and in the school and to alert the student to the need for continuing professional development within his/her career.

Michael Weller  
28th July 1986

## Institutions offering PGCE courses

### **Mr D V Steel**

Course Director for Primary  
Education  
Aberdeen College of  
Education  
Hilton Place  
Aberdeen AB9 1FA

### **Dr D Macnab**

Course Director for  
Secondary Education  
Aberdeen College of  
Education  
Hilton Place  
Aberdeen AB9 1FA

### **Miss Linda Mansell**

Bath CHE  
Newton Park  
Bath  
Avon BA2 9BN

### **Dr W A H Scott**

Director of Studies for PGCE  
University of Bath  
School of Education  
Claverton Down  
Bath BA2 7AY

### **Mr A Fitzgerald**

Senior Tutor for PGCE  
Birmingham University  
Faculty of Education  
PO Box 363  
Birmingham G15 2TT

### **Miss Margaret Rees**

Bedford College of Higher  
Education  
37 Lansdowne Road  
Bedford MK40 2BZ

### **Mr J Harris**

Birmingham Polytechnic  
Faculty of Education and  
Teacher Training  
Westbourne Road  
Edgbaston  
Birmingham B15 3TN

### **Miss Maureen Geddis**

Bishop Grosseteste College  
Lincolnshire LN1 3DY

### **Mr Richard Harris**

Course Tutor for PGCE  
Bolton Institute of Higher  
Education  
Chadwick St  
Bolton

### **Mrs Brenda Shepherd**

Course Tutor for PGCE  
Bradford and Ilkley  
Community College  
Room 265  
Great Horton Road  
Bradford BD7 1AY

### **Dr Irene Farmer**

Head of PGCE  
Bretton Hall College  
West Bretton  
Wakefield  
West Yorkshire WF4 4LG

### **Mr D Baker**

Admissions Tutor  
Brighton Polytechnic  
Faculty of Education  
Village Way  
Falmer  
Sussex BN1 9PH

### **Mrs Bunty Davidson**

Course co-ordinator  
Bristol Polytechnic  
Dept of Education  
Redland Hill  
Redland  
Bristol BS6 6UZ

### **Professor Eric Hoyle**

Bristol University  
School of Education  
PGCE Division  
Helen Wodehouse Building  
35 Berkeley Square  
Bristol BS8 1JA

### **Mr M Weller**

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Bulmershe College of Higher  
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Woodlands Avenue  
Earley

Reading  
Berkshire RG6 1HY

### **Mr D Thomas**

Course Director  
Faculty of Education &  
Design  
Runnymede Campus  
Coopers Hill  
Egham  
Surrey TW20 0JZ

### **Mrs Linda Newbold**

Assistant Secretary  
Cambridge University  
Board of Graduate Studies  
4 Mill Lane  
Cambridge CV2 1RZ

### **Christ Church College**

North Holmes Road  
Canterbury CT1 1QU

### **Mr C Skelding**

Charlotte Mason College  
Rydal Road  
Ambleside  
Cumbria LA22 9BB

### **Chester College of Higher Education**

Cheyney Road  
Chester CH1 4BJ

### **Mr R Peddle**

Course Director for PGCE  
Craigie College of Education  
Ayr KA8 0SR

### **Mr Pellow**

Course Director for PGCE  
Crewe and Alsager College  
of Higher Education  
Crewe Road  
Crewe  
Cheshire CW1 1DU

### **Mr Stuart Watson**

Course Leader for PGCE  
Derbyshire College of HE  
Faculty of Education,  
Humanities and Social  
Sciences

Matlock Campus  
Derbyshire DE4 3FW

### **Mr T Ward**

Course Organiser  
Dundee College of Education  
Gardyne Road  
Broughty Ferry  
Dundee DD5 1NY

### **Mr G M Bolton**

Course Director for Primary  
Education  
Durham University  
Leazes Road  
Durham DH1 1TA

### **Professor G R Batho**

Course Director for  
Secondary Education  
Durham University  
Leazes Road  
Durham DH1 3HP

### **East Anglia University**

Norwich NR4 7TJ

### **Mrs Matthews**

Admissions Officer  
Edge Hill College of HE  
St Helens Road  
Ormskirk  
Lancashire L39 4QP

### **Mr Clive Carne**

PGCE Co-ordinator  
Exeter University  
Dept of Education  
St Luke's  
Heavitree Road  
Exeter EX1 2LU

**Mr Cedric Blackman**

Dean of Studies  
Garnett College  
Dept of Education  
Downshire House  
Rochampton Lane  
London SW15 4HR

**Dr B Gorwood**

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University of Hull  
173 Cottingham Road  
Hull HU5 2EH

**Mr G Davies**

PGCE Course Director  
Gwent College of HE  
College Crescent  
Caerleon  
Newport  
Gwent NP6 1XJ

**Mr E Evans**

Course Tutor for PGCE  
Hertfordshire College of HE  
Wall Hall  
Aldenham  
Watford  
Hertfordshire WD2 8AT

**Mr A Adams**

Huddersfield Polytechnic  
College of FE  
Holybank Road  
Lindley  
Huddersfield

**Miss Anne Reynolds**

PGCE Course Director  
Humberside College of HE  
Inglemire Avenue  
Hull HU6 7LJ

**Mr R McKay**

Course Director for Primary  
Education  
Jordanhill College of  
Education  
Southbrae Drive  
Glasgow G13 1PP

**Mr R McArthur**

Course Director for  
Secondary Education  
Jordanhill College of  
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Southbrae Drive  
Glasgow G13 1PP

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Keele University  
Keele  
Staffordshire ST5 5BG

**Miss Brenda Lucas**

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King Alfred's College  
Sparkford Road  
Winchester  
Hampshire SO22 4NR

**Dr A Heanon**

Head of Post Graduate and  
In service House Training  
Kingston Polytechnic  
Faculty of Education  
Kenry House  
Kingston Hill  
Kingston upon Thames  
Surrey KT2 7LB

**Dr Roger Beard**

Course Director for Primary  
Education  
School of Education  
Leeds University  
Leeds LS2 9JT

**Dr Wain**

Course Director of  
Secondary Education  
School of Education  
Leeds University  
Leeds LS2 9JT

**Mr M Thornber**

PGCE Course Director  
La Sainte Union College of  
HE  
The Avenue  
Southampton SO9 5HB

**Mr A Harding**

Course Director for Primary  
Education  
Leeds Polytechnic  
Beckett Park  
Leeds LS6 3QS

**Mr Bruce Jacker**

Course Director for  
Secondary Education  
Leeds Poly  
Beckett Park  
Leeds LS6 3QS

**Professor B Allison**

Head of PGCE School  
Leicester Poly  
Scraptoft Campus  
Scraptoft  
Leicester LE7 9SO

**Miss Spence**

Education Dept  
Leicester University  
21 University Road  
Leicester LE1 7RF

**Mr M Beattie**

PGCE Course Director  
Liverpool University  
School of Education  
PO Box 147  
Liverpool L69 3BX

**Mr R Hewitt-Jones**

PGCE Course Director  
Liverpool Inst of HE  
PO Box 6  
Stand Park Road  
Liverpool L16 9JD

**Dr E Ward**

Dean of Faculty of Education  
and Commercial Studies  
Liverpool Polytechnic  
IM Marsh Campus  
Bark Hill Road  
Argbuth  
Liverpool L17 6BD

**Miss D Duncan**

Course Director for Primary  
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University of London  
Goldsmith College  
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New Cross  
London SE14 6NW

**Mr J Nicholas**

PGCE Course Director for  
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University of London  
Goldsmith College  
Lewisham Way  
New Cross  
London SE14 6NW

**Mr P Mitchell**

Senior Tutor for PGCE  
London Institute of  
Education  
London University  
20 Bedford Way  
London WC1H 0AL

**Mr J Baker**

PGCE Course Director  
King's College London  
Centre for Education Studies  
Chelsea Campus  
552 King's Rd  
London SW10 0UA

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# Abbreviations used in entries

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This list does not include standard abbreviations for chemical elements and formulae, accepted terminology in physics or names of computer programming languages

<b>ac</b> alternating current	<b>d</b> dimensional (as in 3-d)
<b>addn</b> addition	<b>dc</b> direct current
<b>adj</b> adjacent	<b>Dec</b> December
<b>admin</b> administration, administrative	<b>deg</b> degree
<b>adv</b> advanced	<b>dept</b> department
<b>AFRC</b> Agricultural and Food Research Council	<b>deriv(s)</b> derivative(s)
<b>AI</b> artificial intelligence	<b>Derbys</b> Derbyshire
<b>amp</b> ampere, amperage	<b>DES</b> Department of Education and Science
<b>ANS</b> autonomic nervous system	<b>DNA</b> deoxyribonucleic acid
<b>approp</b> appropriate	<b>doz</b> dozen
<b>approx</b> approximate, approximately	<b>E</b> East, Eastern
<b>assoc</b> association, associated	<b>EC</b> European Community/Communities
<b>atm</b> atmosphere, atmospheric	<b>ecg</b> electrocardiogram, electrocardiography
<b>btwn</b> between	<b>econ</b> economic
<b>bibliog</b> bibliography, bibliographical	<b>EEC</b> European Economic Community
<b>biochem</b> biochemistry, biochemical	<b>eeg</b> electroencephalogram, electroencephalograph
<b>biog</b> biography	<b>eg</b> for example
<b>...</b>	<b>EHD</b> electrohydrodynamics
<b>...</b>	<b>EITB</b> Engineering Industry Training Board
<b>C</b> centigrade, Central	<b>elem</b> elementary
<b>c</b> calendar, circa	<b>e-m</b> electro-magnetic
<b>CAD</b> computer-aided design	<b>e-mf</b> electro motive force
<b>CAE</b> computer aided engineering	<b>emu</b> electro-magnetic unit(s)
<b>CAL</b> computer-aided learning	<b>eng</b> engineering
<b>CAM</b> computer-aided manufacture	<b>eqn(s)</b> equation(s)
<b>cc</b> cubic centimetre(s)	<b>eqpt</b> equipment
<b>CCETSW</b> Central Council for Education and Training in Social Work	<b>equiv</b> equivalent
<b>cent</b> century	<b>esn</b> educationally subnormal
<b>CERN</b> European Centre for Nuclear Research	<b>ESP</b> extra-sensory perception
<b>cert</b> certificate	<b>esp</b> especially
<b>chem</b> chemistry, chemical	<b>esr</b> electron spin resonance
<b>cm</b> centimetre(s)	<b>ESRC</b> Economic and Social Research Council
<b>CNS</b> central nervous system	<b>estab</b> establishment, established
<b>cont</b> continued	<b>eV</b> electron volt
<b>contemp</b> contemporary	<b>exam</b> examination, examined
<b>cpd(s)</b> compound(s)	<b>excl</b> excluding
<b>CQSW</b> Certificate of Qualification in Social Work	<b>expt(l)</b> experiment(al)
<b>cu</b> cubic	<b>Feb</b> February



**fl(s)** fluid(s)  
**fluor** fluorescence, fluorescent  
**freq** frequency  
**FRG** Federal Republic of Germany  
**ft** foot, feet  
**f-t** full-time  
**g** gram(s)  
**gal(s)** gallon(s)  
**GDR** German Democratic Republic  
**gen** general  
**geochem** geochemistry, geochemical  
**geog** geography, geographical  
**geol** geology, geological  
**geom** geometry, geometrical  
**glc** gas liquid chromatography  
**GNP** Gross National Product  
**govt** government  
**gp(s)** group(s)  
**grad(s)** graduate(s)  
**Herts** Hertfordshire  
**h-f** high-frequency  
**hist** history, historical  
**histochem** histochemistry, histochemical  
**hons** honours  
**h-p** high pressure  
**hplc** high performance liquid chromatography  
**hq** headquarters  
**hr(s)** hour(s)  
**h-v** heavy vehicle  
**Hz** Hertz  
**ic** internal combustion  
**illum** illumination  
**illus** illustrated  
**immunochem** immunochemistry, immunochemical  
**immunol** immunology, immunological  
**in(s)** inch(es)  
**inc** include, including  
**inorg** inorganic  
**inst** institute, institution(al)  
**intro** introduction, introductory  
**IPM** Institute of Personnel Management  
**i-r** infra-red  
**Jan** January  
**LA** Library Association  
**lab** laboratory  
**Lancs** Lancashire  
**lang(s)** language(s)  
**lat** latitude  
**lb(s)** pound(s)  
**l-f** low-frequency  
**Lincs** Lincolnshire  
**liq** liquid  
**lit** literature  
**log** logarithm  
**l-p** low-pressure  
**l-temp** low-temperature  
**ltd** limited  
**l-v** low voltage  
**MAFF** Ministry of Agriculture, Fisheries and Food  
**m** metre, million  
**math(s)** mathematical, mathematics  
**max** maximum  
**Mb** megabytes  
**Mc** megacycle(s)  
**med** medieval  
**mf** medium frequency  
**mg** milligram  
**MGD** magnetogasdynamics  
**MHD** magnetohydrodynamics  
**min** minimum  
**min(s)** minute(s)  
**misc** miscellaneous  
**mm** millimetre(s)  
**mod** modern  
**mol wt** molecular weight  
**mpg** miles per gallon  
**mph** miles per hour  
**mr** magnetic resonance  
**MRS** Medical Research Council  
**MSC** Manpower Services Commission  
**ms(s)** manuscript(s)  
**mth(s)** month(s)  
 $\mu$  micro  
**mV** millivolt(s)  
**N** North(ern)  
**neg** negative  
**nemr** nuclear and electron magnetic resonance  
**NERC** Natural Environment Research Council  
**neurochem** neurochemistry, neurochemical  
**NHS** National Health Service  
**nmr** nuclear magnetic resonance  
**Northants** Northamptonshire  
**Northumb** Northumberland  
**Notts** Nottinghamshire  
**Nov** November  
**nqr** nuclear quadruple resonance  
**n-sec** nanosecond

**NZ** New Zealand  
**obj** object  
**ODA** Overseas Development Administration  
**OECD** Organisation for Economic Development and Co operation  
**OR** operational research  
**ord** ordinary  
**org** organic  
**oz(s)** ounce(s)  
**p-g** postgraduate  
**phil** philosophy, philosophical  
**physiochem** physiochemistry, physiochemical  
**physiol** physiology, physiological  
**prehist** prehistory, prehistorical  
**prelim(s)** preliminary, preliminaries  
**p-sec** picasecond  
**psychol** psychology, psychological  
**p-t** part time  
**qr** quarter  
**qual** qualification, qualifying, qualified  
**ref** reference  
**req(s)** requirement(s), required  
**rf** radio frequency  
**RNA** ribonucleic acid  
**Sat** Saturday  
**sec** secant  
**SED** Scottish Education Department  
**SERC** Science and Engineering Research Council  
**sociol** sociology, sociological  
**soln** solution  
**sp** special  
**sp(p)** specie(s)  
**sp ht** specific heat  
**sq** square  
**sq m(s)** square miles(s)  
**stat(s)** statistics, statistical  
**stereochem** stereochemistry  
**STOL** short take off and landing  
**subj** subject  
**subsid** subsidiary  
**tan** tangent  
**TEFL** teaching of English as a foreign language  
**temp** temperature  
**thermochem** thermochemistry, thermochemical  
**tlc** thin layer chromatography  
**TOPS** Training Opportunities Scheme  
**trad** tradition

**trans** translation  
**u-g** undergraduate  
**uhf** ultra high frequency  
**uht** ultra high temperature  
**UK** United Kingdom  
**UKAEA** United Kingdom Atomic Energy Authority  
**univ** university  
**USA** United States of America  
**USSR** Union of Soviet Socialist Republics  
**uV** ultra violet  
**v** very, volt(s)  
**vac** vacuum  
**vel** velocity  
**vet** veterinary  
**vhf** very high frequency  
**vlf** very low frequency  
**vol** volume  
**v-p** vapour pressure  
**W** West  
**Warwicks** Warwickshire  
**wl** wavelength  
**wt** weight  
**yd(s)** yard(s)  
**yr(s)** year(s)  
**zool** zoology, zoological

---

## Abbreviations for institutions

---

Aberdeen University of Aberdeen  
Architectural Assoc S Architectural Association School of Architecture  
Aston University of Aston in Birmingham  
Bath University of Bath  
Bath CHE Bath College of Higher Education  
Belfast Queen's University of Belfast  
Birmingham University of Birmingham  
Birmingham Poly City of Birmingham Polytechnic  
Bishop Grosseteste C Bishop Grosseteste College  
Blackburn C Blackburn College  
Bolton IHE Bolton Institute of Higher Education  
Bradford University of Bradford  
Bradford and Ilkley CC Bradford and Ilkley Community College  
Bretton Hall CHE Bretton Hall College of Higher Education  
Bridgwater C Bridgwater College  
Brighton Poly Brighton Polytechnic  
Bristol University of Bristol  
Bristol Poly Bristol Polytechnic  
Brunel Brunel University  
Buckingham University of Buckingham  
Buckinghamshire CHE Buckinghamshire College of Higher Education  
Bulmershe CHE Bulmershe College of Higher Education  
Camborne SMines Camborne School of Mines  
Cambridge University of Cambridge  
Cambridge Inst Ed Institute of Education, Cambridge  
Cambridgeshire CA & T Cambridgeshire College of Arts and Technology  
Central London Poly Polytechnic of Central London  
Central SA & D Central School of Art and Design  
Chelsea SA Chelsea School of Art  
Chester C Chester College  
Christ Church C Christ Church College  
City City University  
City of London Poly City of London Polytechnic  
Cornwall CF & HE Cornwall College of Further and Higher Education  
Coventry Poly Coventry (Lanchester) Polytechnic  
Cranfield Cranfield Institute of Advanced Technology  
Cranfield (Silsoe) Silsoe College  
Crewe and Alsager CHE Crewe and Alsager College of Higher Education  
Croydon C Croydon College  
Derbyshire CHE Derbyshire College of Higher Education  
Doncaster Met IHE Doncaster Metropolitan Institute of Higher Education  
Dorset IHE Dorset Institute of Higher Education  
Duncan of Jordanstone CA Duncan of Jordanstone College of Art  
Dundee University of Dundee  
Dundee CT Dundee College of Technology  
Dunfermline CPE Dunfermline College of Physical Education  
Durham University of Durham  
Ealing CHE Ealing College of Higher Education

Essex University of Essex  
 Essex IHE Essex Institute of Higher Education  
 Exeter University of Exeter  
 Exeter C Exeter College  
 Farnborough CT Farnborough College of Technology  
 Garnett C Garnett College  
 Glasgow University of Glasgow  
 Glasgow CT Glasgow College of Technology  
 Glasgow SA Glasgow School of Art  
 Gloucestershire CAT Gloucestershire College of Arts and Technology  
 Gwent CHE Gwent College of Higher Education  
 Hertfordshire CA & D Hertfordshire College of Art and Design  
 Hertfordshire CHE Hertfordshire College of Higher Education  
 Huddersfield Poly The Polytechnic, Huddersfield  
 Hull University of Hull  
 Humberside CHE Humberside College of Higher Education  
 Keele University of Keele  
 Kent University of Kent at Canterbury  
 King Alfred's C King Alfred's College  
 Kingston Poly Kingston Polytechnic  
 La Sainte Union CHE La Sainte Union College of Higher Education  
 Lancashire Poly Lancashire Polytechnic  
 Lancaster University of Lancaster  
 Leeds University of Leeds  
 Leeds Poly Leeds Polytechnic  
 Leicester University of Leicester  
 Leicester Poly Leicester Polytechnic  
 Lincoln CT Lincoln College of Technology  
 Liverpool University of Liverpool  
 Liverpool IHE Liverpool Institute of Higher Education  
 Liverpool Poly Liverpool Polytechnic  
 London (Birkbeck) Birkbeck College, London  
 London (Cardiothoracic Inst) Cardiothoracic Institute, London  
 London (Courtauld Inst) Courtauld Institute of Art, London  
 London (Goldsmiths') Goldsmiths' College, London  
 London (Inst Commonwealth Studies) Institute of Commonwealth Studies, London  
 London (Inst Dermatology) Institute of Dermatology, London  
 London (Inst Ed) Institute of Education, London  
 London (Inst Historical Research) Institute of Historical Research, London  
 London (Inst Laryngology and Otology) Institute of Laryngology and Otology,  
 London  
 London (Inst Latin American Studies) Institute of Latin American Studies, London

London (Inst Neurology) Institute of Neurology, London  
 London (Inst Obstetrics and Gynaecology) Institute of Obstetrics and Gynaecology, London  
 London (Inst Ophthalmology) Institute of Ophthalmology, London  
 London (Inst Orthopaedics) Institute of Orthopaedics, London  
 London (Inst Psychiatry) Institute of Psychiatry, London  
 London (Inst US Studies) Institute of United States Studies, London  
 London (Jews') Jews' College, London  
 London (KQC) King's College, London  
 London (LBS) London Business School  
 London (LSE) London School of Economics and Political Science  
 London (LSH & TM) London School of Hygiene and Tropical Medicine  
 London (Pharmacy) School of Pharmacy, London  
 London (Queen Mary) Queen Mary College, London  
 London (RHBC) Royal Holloway and Bedford New College, London  
 London (Royal Veterinary) Royal Veterinary College, London  
 London (SOAS) School of Oriental and African Studies, London  
 London (SSEES) School of Slavonic and East European Studies, London  
 London (UC) University College, London  
 London (Warburg) Warburg Institute, London  
 London (Westfield) Westfield College, London  
 London (Wye) Wye College, London  
 London (Charing Cross & Westminster) Charing Cross and Westminster Hospital Medical School, London  
 London (Guy's & St Thomas') United Medical Schools of Guy's and St Thomas's Hospitals, London  
 London (Middlesex) Middlesex Hospital Medical School, London  
 London (Royal Free) Royal Free Hospital School of Medicine, London  
 London (St Bartholomew's) St Bartholomew's Hospital Medical College, London  
 London (St George's) St George's Hospital Medical School, London  
 London (St Mary's) St Mary's Hospital Medical School, London  
 London C Furniture London College of Furniture  
 London C Printing London College of Printing  
 Loughborough Loughborough University of Technology  
 Luton CHE Luton College of Higher Education  
 Manchester Victoria University of Manchester  
 Manchester (UMIST) University of Manchester Institute of Science and Technology  
 Manchester Poly Manchester Polytechnic  
 Middlesex Poly Middlesex Polytechnic  
 Mid-Kent CH & FE Mid-Kent College of Higher and Further Education  
 Napier C Napier College  
 New C New College  
 Newcastle University of Newcastle upon Tyne  
 Newcastle Poly Newcastle upon Tyne Polytechnic  
 Norfolk CA & T Norfolk College of Arts and Technology  
 N Cheshire C North Cheshire College  
 NE London Poly North East London Polytechnic  
 NE Wales IHE North East Wales Institute of Higher Education  
 N Lindsey CT North Lindsey College of Technology  
 N Scotland C Ag North of Scotland Agricultural College  
 N Staffs Poly North Staffordshire Polytechnic

Norwich City CF & HE Norwich City College of Further and Higher Education  
 Nottingham University of Nottingham  
 Open Open University  
 Oxford University of Oxford  
 Oxford Poly Oxford Polytechnic  
 Paisley CT Paisley College of Technology  
 Plymouth Poly Plymouth Polytechnic  
 Poly of Central London Polytechnic of Central London  
 Poly of North London Polytechnic of North London  
 Poly of Wales Polytechnic of Wales  
 Portsmouth Poly Portsmouth Polytechnic  
 Reading University of Reading  
 Robert Gordon's IT Robert Gordon's Institute of Technology  
 Roehampton IHE Roehampton Institute of Higher Education  
 Royal CA Royal College of Art

St Andrews University of St Andrews  
 St Helens CT St Helens College of Technology  
 St Mark & St John C College of St Mark and St John  
 St Martin's C St Martin's College  
 St Martin's SA St Martin's School of Art  
 St Mary's C St Mary's College  
 St Paul & St Mary's C College of St Paul and St Mary  
 Salford University of Salford  
 Scottish C Textiles Scottish College of Textiles  
 Seale-Hayne C Seale Hayne College  
 Sheffield University of Sheffield  
 Sheffield City Poly Sheffield City Polytechnic  
 Slough CHE Slough College of Higher Education  
 Southampton University of Southampton  
 Southampton IHE Southampton Institute of Higher Education  
 South Bank Poly Polytechnic of the South Bank  
 South Glamorgan IHE South Glamorgan Institute of Higher Education  
 Stirling University of Stirling  
 Strathclyde University of Strathclyde  
 Suffolk CH & FE Suffolk College of Higher and Further Education  
 Sunderland Poly Sunderland Polytechnic  
 Surrey University of Surrey  
 Sussex University of Sussex  
 Swindon C Swindon College  
 Teesside Poly Teesside Polytechnic  
 Thames Poly Thames Polytechnic  
 Thurrock TC Thurrock Technical College  
 Trent Poly Trent Polytechnic  
 Tresham C Tresham College  
 Trinity C Trinity College  
 Ulster University of Ulster  
 Wales (Aberystwyth) University College of Wales, Aberystwyth  
 Wales (Bangor) University College of North Wales, Bangor

**Wales (Cardiff)** University College, Cardiff  
**Wales (C of Medicine)** University of Wales College of Medicine  
**Wales (Lampeter)** St David's University College, Lampeter  
**Wales (Swansea)** University College of Swansea  
**Wales (UWIST)** University of Wales Institute of Science and Technology  
**Warwick** University of Warwick  
**Watford C** Watford College  
**Welsh CM & D** Welsh College of Music and Drama  
**W Glamorgan IHE** West Glamorgan Institute of Higher Education  
**W London IHE** West London Institute of Higher Education  
**W Midlands CHE** West Midlands College of Higher Education  
**W Scotland AgC** West of Scotland Agricultural College  
**W Sussex IHE** West Sussex Institute of Higher Education  
**Wimbledon SA** Wimbledon School of Art  
**Wolverhampton Poly** The Polytechnic, Wolverhampton  
**Worcester CHE** Worcester College of Higher Education  
**Worcester TC** Worcester Technical College  
**York** University of York

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## Research facilities and courses

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# Brunel

THE UNIVERSITY OF WEST LONDON

Brunel is a technological university comprising faculties of Technology, Science, Education and Design and Social Sciences. The main campus is in the London Borough of Hillingdon with a second campus on the Thames at Uxbridge. It is very close to the M4, M40 and M25 motorways and Uxbridge underground station, hence access to Central London is easy.

This modern university has excellent facilities and amenities, most notably its library, computer centre, laboratories and workshops. There are Halls of Residence, shops and a bank on campus.

Research towards PhDs or MPhil's is carried out in all departments, most of which also offer Masters or Graduate Diploma courses. Part-time courses are of 2-3 years' duration, requiring attendance for one day a week. Full-time courses normally last one year.

## *Part-time only*

Computer Science – Computing Systems – Industrial Relations  
Youth and Community Studies (Diploma)  
Continuing Development Programme (Technology)

## *Full-time only*

Business administration\*† – Non-destructive Testing of Materials  
Semiconductor Physics and Technology  
Welding and Adhesive Bonding of Engineering Materials  
Petroleum Technology and Management Systems (Grad. Dipl.)  
Postgraduate Certificate of Education

## *Part time and full-time*

Advanced Teaching Studies – Applied Immunology  
Building Services Engineering – Construction Management  
Digital Systems – Environmental Pollution Science – Intelligent Systems  
Management Studies† – Medical Biochemistry  
Microelectronics Systems Design – Numerical Analysis  
Project Management† – Public and Social Administration  
Sociology and Law – Statistics

\*Modular

## *Further details*

Academic Secretary (Ref. SG87) Brunel University,  
Uxbridge, Middlesex UB8 3PH. Telephone Uxbridge (0895) 74000

†The Director, Henley the Management College, Greenlar  
Henley on Thames, Oxon. Telephone Henley (0464) 20000

# Chapter headings and numbers

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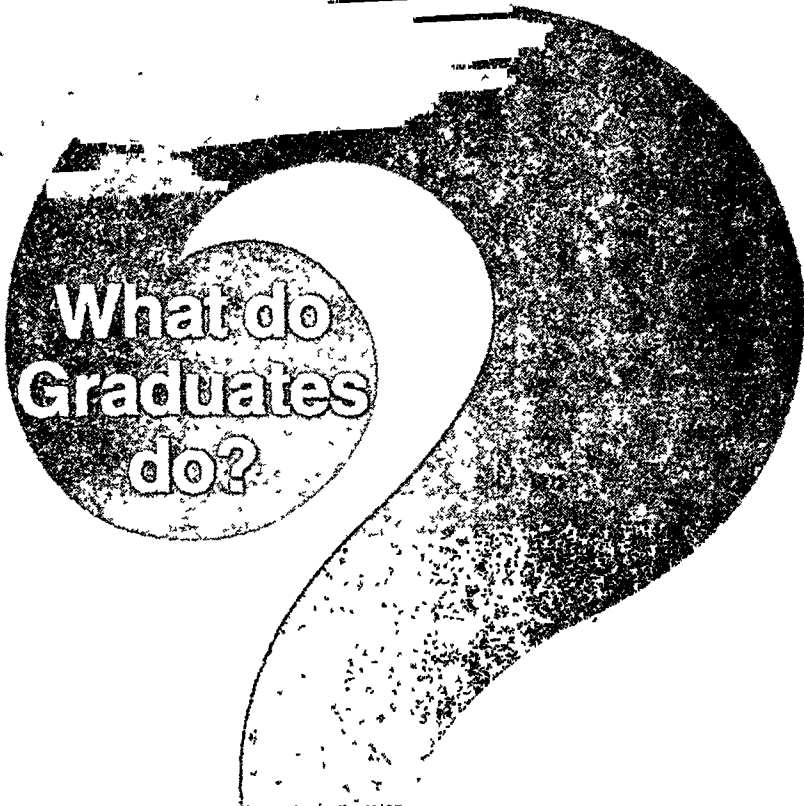
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## **Research facilities and courses: Humanities and social sciences**

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For institution addresses and further information sources, see the 'Institutions' section, starting on page 479.

# 1 Anthropology

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which propose to carry out research. Information about the periods of study required for research degree given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 1:1 **Belfast**, *Social anthropology*, MA/PhD
- 1:2 **Cambridge**, *Physical anthropology*, MLitt/MSc/PhD; supervision available; facilities for research in various branches of biological anthropology; research interests include: genetic structure of human populations, extent and functions of genetic variation in man; biometric, ecological and behavioural studies of living and fossil primates; hominid growth and evolution; hominid evolutionary ecology; study of excavated skeletal remains (to throw light on disease, nutrition and other conditions of life in past populations); analysis of anthropometric and psychometric characteristics; effects of assortative mating, migration and genotype-environment interactions; biological correlates of reproductive performance; facilities for radiographic, serological, biochemical, biometrical and morphological research; human skeletal material available include Pearson and Duckworth Collections, over 15,000 specimens from Neolithic to recent date, representative series of primate skeletons and collection of casts of fossil primates and fossil hominids. Contact Dr CGN May at Taylor
- 1:3 **Cambridge**, *Social anthropology*, MLitt/MSc/PhD
- 1:4 **Durham**, *Anthropology*, MA/MPhil/MSc/PhD; supervision available, research interests include: social anthropology: social change in developing countries with special reference to hunter-gatherer and peasant communities, art, religion and symbolism, nomadic societies, psychological anthropology; regional interests include Caribbean, Middle East and Islamic countries especially Iran, South and South East Asia, Africa, West Africa, Guinea and Australia; biological anthropology: hominid palaeoecology and evolution, demography and population genetics with special reference to British Isles, primate evolution and behavioural ecology. Contact Professor A Bilsborough
- 1:5 **East Anglia**, *Sociology and social anthropology*, MPhil/PhD
- 1:6 **Edinburgh**, *Social anthropology*, MPhil/PhD
- 1:7 **Hull**, *Sociology and social anthropology*, MPhil/PhD
- 1:8 **Keele**, *Sociology and social anthropology*, MA/PhD
- 1:9 **Kent**, *Sociology and social anthropology*, MPhil/PhD
- 1:10 **London (Goldsmiths')**, *Social anthropology*, MPhil/PhD
- 1:11 **London (LSE)**, *Social anthropology*, MPhil/PhD
- 1:12 **London (SOAS)**, *Anthropology and sociology*, MPhil/PhD
- 1:13 **London (UC)**, *Anthropology*, MPhil/PhD
- 1:14 **Manchester**, *Social anthropology*, MA(Econ)/PhD
- 1:15 **Newcastle**, *Social studies*, MA/PhD
- 1:16 **Oxford**, *Biological anthropology*, MSc/DPhil
- 1:17 **Oxford**, *Ethnology and prehistory*, MLitt/DPhil
- 1:18 **Oxford**, *Social anthropology*, MLitt/MSc/DPhil See page 48
- 1:19 **St Andrews**, *Social anthropology*, MPhil/PhD
- 1:20 **Salford**, *Sociology and anthropology*, MA/MSc/PhD
- 1:21 **Stirling**, *Sociology*, MSc/PhD
- 1:22 **Sussex**, *Social anthropology*, MPhil/DPhil
- 1:23 **Ulster**, *Sociology and social anthropology*, MPhil/DPhil
- 1:24 **Wales (Swansea)**, *Sociology and anthropology*, MSc(Econ)/PhD

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

Belfast, *Social anthropology*, MA

Belfast, *Social anthropology (applied anthropology)*, MA

Belfast, *Social anthropology (community studies in Western Europe)*, MA

Belfast, *Social anthropology (ethnomusicology)*, MA

Bristol, *Religion and mythology in the ancient world*, MA

Cambridge, *Biological anthropology*, MPhil, 1 yr f-t, emphasis on research methods, course content: human variation, population structure, ecology and adaptation, primatology, palaeo-anthropology, research methods, assessment by thesis, essays, oral exam. Contact Dr CGN Mascie-Taylor

Cambridge, *Social anthropology*, MPhil

Durham, *Biological anthropology*, MSc, 1 yr f-t, topics available include: hominid evolution and

palaeoecology, human population diversity and adaptation, human genetics, primate ecology and

evolution, field work procedures and analytical techniques, exam and dissertation. Contact

Dr J. A. J. Gowlett

Durham, *Biological anthropology*, MSc, 1 yr f-t, topics available include: hominid evolution and

palaeoecology, human population diversity and adaptation, human genetics, primate ecology and

evolution, field work procedures and analytical techniques, exam and dissertation. Contact

Dr J. A. J. Gowlett

Oxford, *Anthropological archaeology*, MSt

Oxford, *Social anthropology*, MPhil/MSt. See page 48

St Andrews, *Linguistics and social anthropology*, MLitt

Sussex, *Social anthropology*, MA



## SOCIAL ANTHROPOLOGY AT OXFORD



The Institute of Social Anthropology at the University of Oxford is a leading centre for graduate study and research. Students are admitted from many different disciplinary backgrounds, the minimum entrance qualification being an upper second class honours degree or its equivalent. Courses available are as follows:

- The one-year taught course for the MSt (successor to the former Diploma, offered since 1905).
- The two-year MPhil, of which the first year is a taught course and the second largely spent on a dissertation.
- The MLitt degree by research, for which students may register who already hold a qualification in social anthropology.
- The DPhil by research, for which students may register after completing the MPhil or MLitt, or in appropriate circumstances by transferring from the latter.

Specialist teaching and supervision is available for Northeast and West Africa, the Middle East, Europe, South and Southeast Asia, and Latin America.

*Further information and applications from the Admissions Secretary, Institute of Social Anthropology, 51 Banbury Road, Oxford OX2 6PF.*

# Which course?

See chapter  
headings on  
pages 42 and  
43 for cognate  
subjects

# Archaeology

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

**Belfast, Archaeology, MA/PhD**

**Birmingham, Ancient history and archaeology, MA/MLitt/PhD**

**Bradford, Physics, MPhil/PhD**

**Cardiff, Archaeology, MA/PhD**

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**Cardiff, Archaeology, MA/PhD**

**N Staffs Poly, Computer applications in archaeology, MPhil/PhD (CNAA)**

**Nottingham, Archaeology, MPhil/PhD**

**Open, Roman Britain, BPhil/MPhil/PhD**

**Oxford, Archaeology, MLitt/DPhil**

**Oxford, Archaeology, MLitt/DPhil**

**Oxford, Archaeology, MLitt/DPhil**

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**Oxford, Archaeology, MLitt/DPhil**

**Oxford, Archaeology, MLitt/DPhil**

**Oxford, Archaeology, MLitt/DPhil**

**Sheff (Lampeter), Archaeology, MA/PhD**

**York, Archaeology, MPhil/DPhil**

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research (normally lasting three months) with submission of a written report, dissertation or thesis is a part of these courses.*

- 2:36 Birmingham, *Archaeological practice*, MA
- 2:37 Birmingham, *Industrial archaeology*, MSocSc/Diploma
- 2:38 Birmingham, *Medieval archaeology*, MA
- 2:39 Bradford, *Scientific methods in archaeology*, MA/Diploma
- 2:40 Cambridge, *Archaeology*, MPhil
- 2:41 Durham, *Early man and the environment*, MA See page 51
- 2:42 Durham, *Later Roman and early medieval archaeology*, MA See page 51
- 2:43 Durham, *Roman archaeology*, MA See page 51
- 2:44 Edinburgh, *Archaeology*, MLitt
- 2:45 Edinburgh, *Classical archaeology*, MLitt/MSc/Diploma
- 2:46 Glasgow, *Celtic archaeology*, MPhil
- 2:47 Liverpool, *Classical archaeology*, BPhil
- 2:48 Liverpool, *Prehistoric archaeology*, BPhil
- 2:49 London (Inst Archaeol), *Archaeology*, MA/MSc
- 2:50 London (Inst Archaeol), *Bioarchaeology*, MSc
- 2:51 London (Inst Archaeol), *Field and analytical methods and techniques in archaeology*, MA
- 2:52 London (Inst Archaeol), *Museology*, MA
- 2:53 London (SOAS), *History of art/art and archaeology*, MA
- 2:54 London (UC), *Archaeology of Greece*, MA
- 2:55 London (UC), *Medieval archaeology*, MA
- 2:56 Newcastle, *Archaeology*, MPhil
- 2:57 Newcastle, *Archaeology*, MA, 1 yr f-t; 2 yrs p-t; *course content*: 1 of: prehistoric Europe; Britain; Roman frontier studies (frontiers of Roman Empire, N frontier of Roman Empire); archaeology of Roman Empire (Roman art and architecture, study of a province or provinces); other coursework possible; dissertation; 1 f-t: heritage, management and Contact Professor PJ Fowler
- 2:58 Newcastle, *Greek archaeology*, MA
- 2:59 Nottingham, *Archaeology*, MA
- 2:60 Nottingham, *Viking studies*, MA
- 2:61 Oxford, *Anthropological archaeology*, MSt
- 2:62 Oxford, *Archaeology*, MSt
- 2:63 Oxford, *Classical archaeology*, MPhil/MSt
- 2:64 Oxford, *European archaeology*, MPhil/MSt
- 2:65 Oxford, *Prehistoric archaeology*, MPhil/MSt
- 2:66 Reading, *Archaeology*, MA
- 2:67 Sheffield, *Ancient history and classical archaeology*, MA
- 2:68 Sheffield, *Archaeology and prehistory*, MA, 1 yr f-t; *course content*: archaeological theory, method, and any 2 of: Palaeolithic and Mesolithic archaeology, later prehist of Europe; prehist of Mediterranean and Near E, British prehist; assessment of coursework in lab techniques, 2 theoretical and 1 practical exam paper, dissertation. Contact Professor K Branigan
- 2:69 Sheffield, *Environmental archaeology and palaeoeconomy*, MA
- 2:70 Sheffield, *Palaeopathology and funerary archaeology*, MA, 1 yr f-t; *course provides* intens to study of human skeletal remains, and to methods and techniques employed in studying populations; practical instruction in sexing, ageing and palaeopathology of human remains of burial practices in early Britain, stat and anthropological approaches to palaeodemographic assessment of coursework in lab techniques, 2 theoretical and 1 practical exam paper, dissertation. Contact Professor K Branigan
- 2:71 Southampton, *Archaeological method*, MA
- 2:72 Southampton, *Archaeological science*, MSc
- 2:73 Wales (Bangor), *Marine archaeology*, MSc/Diploma
- 2:74 Wales (Swansea), *Egyptology*, MA

- 5 York, *Medieval British archaeology*, MA  
 6 York, *Medieval studies: age of Sutton Hoo*, MA/Diploma

### Certificates and diplomas

- 7 Bradford, *Archaeological studies*, Diploma  
 8 Cambridge, *Classical archaeology*, Diploma  
 9 Durham, *Archaeological conservation*, Diploma See page 51  
 0 Leicester, *Post-excavation studies*, Diploma, 1 yr f t, aims to provide students with practical basis for studying material from excavations Contact Registrar (Higher Degrees)  
 1 London (UC), *Classical archaeology Greece*, Diploma  
 2 St Andrews, *Maritime studies*, Diploma

## University of Durham

ng an conservation thermoluminescence archaeo-  
 by

r Medieval Archaeology Options in late medieval and  
 y medieval European archaeology Anglo-Saxon  
 aeology/art/architecture Viking archaeology British  
 N Atlantic/Scandinavia topics in archaeology

for information from Department of Archaeology  
 University of Durham  
 Leazes Road  
 Durham DH1 1TA  
 Telephone 0191 644466

## Addresses of institutions

are on pages  
479-508

## 3 Archive and museum studies, palaeography

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Palaeography studies' section.*

- 3:1 Cambridge, *Anglo-Saxon, Norse and Celtic*, MLitt/PhD
- 3:2 Leicester, *Museum studies*, MPhil/PhD
- 3:3 London (KQC), *Palaeography*, MPhil/PhD
- 3:4 London (UC), *Archive studies*, MPhil/PhD
- 3:5 Manchester, *Palaeography*, MPhil/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is a part of these courses*

- 3:6 Belfast, *Modern history*, MA
- 3:7 Birmingham, *Cuneiform studies*, MA
- 3:8 Birmingham, *Fine arts*, MA
- 3:9 Birmingham Poly, *History of art and design*, MA/Diploma (CNA)
- 3:10 Cambridge, *Archaeology*, MPhil
- 3:11 Cambridge, *Social anthropology*, MPhil
- 3:12 City, *Museums and gallery administration*, MA
- 3:13 College of Librarianship (Wales), *Education for library, information and archival studies* (Wales)
- 3:14 Leicester, *Museum studies*, MA/MSc/Certificate, 1 yr f-t; plus for MA/MSc additional museum employment while preparing dissertation; *course content*: hist background, organisation, buildings and eqpt, collections and exhibits, museum activities, practical academic and museographic studies in 1 of: archaeology, geol, natural hist, local hist, science, hist of technology Contact Registrar (Higher Degrees)
- 3:15 Liverpool, *Archive administration*, MA
- 3:16 Liverpool, *Medieval studies*, MA
- 3:17 London (Inst Archaeol), *Muscology*, MA
- 3:18 London (UC), *Archive studies*, MA
- 3:19 London (UC), *Overseas archive studies*, MA
- 3:20 Loughborough, *Archive, library and information studies and education*, MA
- 3:21 Loughborough, *Archives*, MA
- 3:22 St Andrews, *National Trust for Scotland studies*, MLitt

### Certificates and diplomas

- 3:23 London (Inst Ed), *Museum studies: art and design*, Diploma
- 3:24 London (UC), *Archive studies*, Diploma
- 3:25 Manchester, *Art gallery and museum studies*, Diploma
- 3:26 Wales (Aberystwyth), *Archive administration*, Diploma
- 3:27 Wales (Bangor), *Archive administration*, Diploma

## 1. Design and the Law

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and the role of the accounting department in ensuring the integrity of the financial statements. It also highlights the need for regular audits and the importance of transparency in financial reporting.

2. The second part of the document focuses on the management of human resources, including recruitment, training, and performance evaluation. It emphasizes the importance of having a clear job description for each position and the need for ongoing communication between management and staff.

3. The third part of the document addresses the issue of risk management, discussing the various risks that a company may face and the strategies for mitigating them. It also touches on the importance of having a disaster recovery plan in place.

4. The fourth part of the document deals with the legal and regulatory aspects of business operations, including compliance with local, national, and international laws. It also discusses the importance of having a legal counsel on retainer.

5. The fifth part of the document discusses the importance of maintaining a strong corporate culture and the role of the CEO in setting the tone for the organization. It also touches on the importance of having a clear vision and mission statement.

6. The sixth part of the document discusses the importance of having a strong marketing and sales strategy and the role of the marketing department in ensuring that the company's products and services are effectively promoted.

7. The seventh part of the document discusses the importance of having a strong financial strategy and the role of the finance department in ensuring that the company has sufficient funds to meet its obligations.

8. The eighth part of the document discusses the importance of having a strong operational strategy and the role of the operations department in ensuring that the company's processes are efficient and effective.

9. The ninth part of the document discusses the importance of having a strong information technology strategy and the role of the IT department in ensuring that the company's data is secure and accessible.

10. The tenth part of the document discusses the importance of having a strong sustainability strategy and the role of the sustainability department in ensuring that the company's operations are environmentally friendly and socially responsible.

- 4:129 Royal CA, *Photography*, MA
- 4:130 Royal CA, *Printmaking*, MA
- 4:131 Royal CA, *Product planning*, MA
- 4:132 Royal CA, *Sculpture*, MA
- 4:133 Royal CA, *Tapestry*, MA
- 4:134 Royal CA, *Textile design*, MA
- 4:135 Royal CA, *Visual Islamic studies*, MA
- 4:136 St Andrews, *Gallery studies*, MLitt
- 4:137 St Andrews, *History of art*, MLitt/Diploma
- 4:138 St Andrews, *National Trust for Scotland studies*, MLitt
- 4:139 St Martin's SA (London), *Fashion/textiles*, MA
- 4:140 South Glamorgan IHE, *Ceramics*, MA (CNA)
- 4:141 South Glamorgan IHE, *Fine art*, MA (CNA)
- 4:142 Sussex, *History of art*, MA
- 4:143 Trent Poly, *Knitwear and knitted fabric design*, MA (CNA)
- 4:144 Ulster, *Fine art*, MA
- 4:145 Wales (Aberystwyth), *Visual art*, MA
- 4:146 Wimbledon SA, *Printmaking*, MA/Diploma (CNA)

## Certificates and diplomas

- 4:147 Birmingham Poly, *Professional studies in education (art and design)*, Diploma
- 4:148 Bretton Hall CHE, *Art education*, Advanced Diploma
- 4:149 Brighton Poly, *Creative embroidery*, Diploma
- 4:150 Bristol Poly, *Fine art*, Diploma
- 4:151 Bristol Poly, *Graphic design*, Diploma
- 4:152 Central SA & D (London), *Printmaking*, Diploma
- 4:153 Central SA & D (London), *Textile design*, Diploma
- 4:154 City, *Arts administration*, Diploma
- 4:155 Duncan of Jordanstone CA (Dundee), *Design*, Diploma
- 4:156 Duncan of Jordanstone CA (Dundee), *Drawing and painting*, Diploma
- 4:157 Duncan of Jordanstone CA (Dundee), *Sculpture*, Diploma
- 4:158 Essex IHE, *Art education*, Diploma (CNA)
- 4:159 Glasgow SA, *Art and design*, Diploma
- 4:160 Hertfordshire CA & D, *Art therapy*, Diploma (CNA)
- 4:161 Hertfordshire CHE (Watford), *Teaching of art*, Diploma
- 4:162 King Alfred's C (Winchester), *Art in education*, Diploma (CNA)
- 4:163 Leeds, *Textile design*, Diploma
- 4:164 Leeds Poly, *Art history*, Diploma
- 4:165 London (Courtauld Inst), *Conservation of paintings*, Diploma
- 4:166 London (Courtauld Inst), *Conservation of textiles*, Diploma
- 4:167 London (Goldsmiths'), *Art education*, Diploma
- 4:168 London (Goldsmiths'), *Art therapy*, Diploma
- 4:169 London (Goldsmiths'), *Ceramics*, Diploma
- 4:170 London (Goldsmiths'), *Craft, design and technology education*, Diploma
- 4:171 London (Goldsmiths'), *Textile art*, Diploma
- 4:172 London (Inst Ed), *Art and design education*, Diploma
- 4:173 London (Inst Ed), *Design education with special reference to craft and technology*, Diploma
- 4:174 London (Inst Ed), *Museum studies: art and design*, Diploma
- 4:175 London (UC), *Fine art*, Higher Diploma
- 4:176 London C Furniture, *Design of equipment for disability*, Diploma (CNA)
- 4:177 London C Printing, *Design and media technology*, Diploma (CNA)
- 4:178 Manchester, *Art gallery and museum studies*, Diploma
- 4:179 New C (Durham), *Craft design and technology*, Diploma (Durham)
- 4:180 Oxford, *History of art*, Diploma

- 4 181 *Cambridge School of Architecture* Diploma  
 4 182 *Cambridge School of Architecture* Diploma  
 4 183 *Cambridge School of Architecture* Diploma  
 4 184 *Cambridge School of Architecture* Diploma  
 4 185 *Cambridge School of Architecture* Diploma  
 4 186 *Sheffield Art therapy Diploma*  
 4 187 *Sheffield City Poly, Criticism and the visual arts Diploma*  
 4 188 *Sheffield City Poly, Design technology Diploma*  
 4 189 *Trent Poly, Craft design and technology Diploma*  
 4 190 *Ulster, Art and design Diploma*  
 4 191 *Wales (Aberystwyth), Visual art Diploma*  
 4 192 *Warwick, History of art Diploma*  
 4 193 *West Glamorgan IHE (Swansea), Design and technology Diploma (Wales)*

## The City University

### DEPARTMENT OF ARTS POLICY & MANAGEMENT

#### MA in Arts Administration

for people with arts administration  
 (full time or part time one day a week)

#### MA in Librarianship and Arts Administration

for people working in the Department of  
 Information Science one day a week part time

#### MA in Arts Management in Education

for those interested in the promotion of the arts in  
 education  
 (full time or part time evenings and Saturdays)

This is a special fee course and applicants should  
 apply to their local authority for support

#### MA in Museum and Gallery Administration

for people with experience in the public or  
 private sector in management of museums or galleries  
 (full time or evenings and Saturdays)

All self-financing programmes require several  
 years experience in the field

For further particulars and application form please send  
 9 x 6 S1F to Jane Purkiss, Department of Arts Policy  
 & Management, City University, Level 12, Frobisher  
 Crescent, Barts Lane, Silk Street, London EC2Y 8HB

## UNIVERSITY OF EDINBURGH HISTORY OF ART

Taught postgraduate courses leading to the  
 degree of MSc are available in

- 1) Aspects of Classical Art
- 2) Studies in Islamic Art
- 3) The Art and Architecture of the Later  
 Anglo-Saxon period
- 4) The Art and Architecture of Medieval  
 Scotland
- 5) An Introduction to Medieval Epigraphy  
 and
- 6) The Decorated Book in the Middle Ages  
 and the Renaissance

For specimen slide lists of old address their  
 enquiries to

The Professor  
 Department of Fine Art  
 University of Edinburgh  
 19 George Square  
 Edinburgh EH8 9LD

Telephone 031-667 1011 extension 2442



# 5 Business, administrative and management studies

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 5:1 **Aston, Industrial studies**, MPhil
- 5:2 **Aston, Management**, MPhil/PhD
- 5:3 **Bath, Management**, MPhil/PhD; research programme covering most areas of management; current staff interests inc: accounting and finance, business policy, decision analysis, industrial and managerial economics, marketing, manpower studies and industrial relations, OR, organisational analysis and development; p-g projects range from research into individual organisations' management/admin problem to comparative international studies; all students take training course research methods. Contact Mrs SJ Clark See page 69
- 5:4 **Belfast, Business studies**, PhD
- 5:5 **Birmingham, Industrial economics and business studies**, MSocSc/MPhil/PhD
- 5:6 **Birmingham Poly, Business and management studies**, MPhil/PhD (CNA A)
- 5:7 **Bradford, Industrial technology**, MPhil/PhD
- 5:8 **Bradford, Management and administration**, MPhil/PhD
- 5:9 **Bradford, Technological management**, MPhil/PhD
- 5:10 **Brighton Poly, Management, business studies, finance and accountancy**, MPhil/PhD
- 5:11 **Bristol Poly, Business studies**, MPhil/PhD (CNA A)
- 5:12 **Bristol Poly, Management studies**, MPhil/PhD (CNA A)
- 5:13 **Brunel, Management studies**, MPhil/PhD
- 5:14 **Buckingham, Business studies**, MPhil/DPhil
- 5:15 **City, Management studies**, MPhil/PhD; supervision available for research in following fields; some specific projects named: *management accountancy and financial management*: profit definition and measurement in relation to inflation; *managerial economics*: long-term marginal cost pricing; public policies on competition and pricing in large scale; *insurance studies*: register of insurance records in public and private hands; *portfolio investment management*: security price data bank; behaviour of London stock market prices; *marketing*: international business operations; role of supervisors in industrial organisations, study of conditions promoting change in catering industry; *business planning and strategy*: simulation model to assist decisions on diversification; *OR*: critical path method and conceptually related techniques; *business law*: international econ and trade law; international sale of goods; *systems analysis*: information retrieval techniques; file design and organisation; *internal auditing*: control of large organisations, internal auditing of real-time computer systems. Contact Mrs E Taylor
- 5:16 **City of London Poly, Business law**, MPhil/PhD (CNA A)
- 5:17 **City of London Poly, Business studies**, MPhil/PhD (CNA A)
- 5:18 **City of London Poly, Insurance and banking**, MPhil/PhD (CNA A)
- 5:19 **City of London Poly, Marketing**, MPhil/PhD (CNA A)
- 5:20 **Dorset IHE (Poole), Business management**, MPhil/PhD (CNA A)
- 5:21 **Dorset IHE (Poole), Catering and hotel administration**, MPhil/PhD (CNA A)
- 5:22 **Dorset IHE (Poole), Tourism and field sciences**, MPhil/PhD (CNA A)
- 5:23 **Durham, Business management**, MA/PhD
- 5:24 **Edinburgh, Business studies**, MPhil/PhD
- 5:25 **Glasgow, Management studies**, MLitt/PhD
- 5:26 **Gwent CHE (Newport), Management and business studies**, MPhil/PhD (CNA A)
- 5:27 **Hatfield Poly, Business and social studies**, MPhil/PhD (CNA A)
- 5:28 **Heriot-Watt, Business organisation**, MLitt/PhD; supervision available, research interests: *g management*: strategic issues in various industrial sectors; strategic success factors in medium-size

companies organisational implications of new technology flexible integrated manufacturing  
 of new technology upon industrial relations in telecommunications industry enhanced eng educa  
 tion development of 1st stage in life cycle of a small business marketing marketing planning and

- 5 29 Huddersfield Poly, *Catering studies* MPhil/PhD (CNAAB)  
 5 30 Huddersfield Poly, *Economic and marketing studies* MPhil/PhD (CNAAB)  
 5 31 Huddersfield Poly, *Management and administrative studies* MPhil/PhD (CNAAB)  
 5 32 Hull, *Management systems and sciences* MSc/MPhil/PhD  
 5 33 Kent, *Industrial relations*, MPhil/PhD  
 5 34 Kent, *Management science*, MPhil/PhD  
 5 35 Lancashire Poly, *Management studies*, MPhil/PhD (CNAAB)  
 5 36 Lancaster, *Management learning* MPhil/PhD  
 5 37 Lancaster, *Marketing* MPhil/PhD  
 5 38 Lancaster, *Operational research* MPhil/PhD  
 5 39 Lancaster, *Systems*, MPhil/PhD  
 5 40 Leeds, *Management studies* MPhil/PhD  
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 5 49 Manchester (UMIST), *Management sciences* MSc/PhD  
 5 50 Manchester Poly, *Management and business* MPhil/PhD (CNAAB)  
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 5 66 Poly of Central London, *Marketing*, MPhil/PhD (CNAAB)  
 5 67 Poly of North London, *Business studies*, MPhil/PhD (CNAAB)  
 5 68 Poly of Wales, *Business and administrative studies*, MPhil/PhD (CNAAB)  
 5 69 Portsmouth Poly, *Management studies* MPhil/PhD  
 5 70 St Andrews, *Management sciences and studies*, MPhil/PhD

- 5:71 Salford, *Business and administration*, MPhil/MSc/PhD
- 5:72 Salford, *Collaborative studies*, MSc/PhD
- 5:73 Sheffield City Poly, *Business studies*, MPhil/PhD (CNA A)
- 5:74 Sheffield City Poly, *Hotel and catering studies and home economics*, MPhil/PhD (CNA A)
- 5:75 Sheffield City Poly, *Management studies*, MPhil/PhD (CNA A)
- 5:76 Southampton, *Accounting and management science*, MPhil/PhD
- 5:77 South Bank Poly, *Management, economic and industrial studies*, MPhil/PhD (CNA A)
- 5:78 Stirling, *Business studies*, MSc/PhD See page 68
- 5:79 Stirling, *Management science*, MSc/PhD; supervision available in areas of: management of technological innovation, project management; appraisal and selection of industrial research projects; energy management in industry and commerce; management of waste disposal and recycling inc radioactive and other hazardous wastes, management of water resources and food processing; production scheduling; industrial reliability, availability, productivity; management of telecommunications, technology in banking; management of higher education; applications of simulation and math programming, applications of microcomputers in management. Contact Profesor DH Allen
- 5:80 Strathclyde, *Administration*, MSc/PhD
- 5:81 Strathclyde, *Hotels and catering*, MSc/PhD
- 5:82 Strathclyde, *Industrial relations*, MSc/PhD
- 5:83 Strathclyde, *Marketing*, MSc/PhD
- 5:84 Strathclyde, *Office organisation*, MSc/PhD
- 5:85 Sunderland Poly, *Business management*, MPhil/PhD (CNA A)
- 5:86 Surrey, *Hotel, catering and tourism management*, MPhil PhD
- 5:87 Sussex, *Labour studies*, MPhil/DPhil
- 5:88 Teesside Poly, *Administrative and social studies*, MPhil/PhD (CNA A)
- 5:89 Teesside Poly, *Business and professional studies*, MPhil/PhD (CNA A)
- 5:90 Teesside Poly, *Management*, MPhil (CNA A)
- 5:91 Thames Poly, *Business administration*, MPhil/PhD (CNA A)
- 5:92 Trent Poly, *Business studies*, MPhil/PhD (CNA A)
- 5:93 Trent Poly, *Management studies*, MPhil/PhD (CNA A)
- 5:94 Ulster, *Business and management*, MPhil/DPhil
- 5:95 Wales (Cardiff), *Industrial relations and management studies*, MSc/Econ/PhD
- 5:96 Wales (Swansea), *Management science and statistics*, MSc/PhD; supervision available, current research interests inc systems dynamics, combinatorial optimisation, multi-objective decision making, production planning, inventory control, management information systems, applied probability and point processes, stat computing, applied stats esp in biol and medical areas. Contact Dr K Dowland
- 5:97 Wales (UWIST), *Business administration and accountancy*, MSc(Econ)/PhD
- 5:98 Wales (UWIST), *Management, engineering production and economics*, MSc/PhD
- 5:99 Warwick, *Industrial and business studies*, MA/MSc/MPhil/PhD
- 5:100 West Glamorgan IHE (Swansea), *Business studies and management*, MPhil/PhD (CNA A)
- 5:101 Wolverhampton Poly, *Business and management studies*, MPhil/PhD (various univs)

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normal part of these courses

- 5:102 Aston, *Business administration*, MBA/Diploma
- 5:103 Aston, *Personnel management*, MSc/Diploma
- 5:104 Bath, *Business administration*, MSc, 1c yr f-t, focus on central corporate issues of business policy and strategy, core studies business policy inc decision analysis and business forecast managerial economics, financial management, marketing; entrepreneurship team-based project Contact Mrs SJ Clark See page 69
- 5:105 Belfast, *Business administration*, MBA

- 5 106 Belfast, *Business studies* MSc(Mgt)  
5 107 Birmingham, *Business administration* MBA  
5 108 Birmingham, *Industry, employment and planning*, MSocSc  
5 109 Birmingham, *Leisure and tourism* MSocSc  
5 110 Bradford, *Business administration*, MBA  
5 111 Brighton Poly, *Management studies*, MBA/DMS (CNAAB)  
5 112 Brunel, *Industrial relations*, MA/Diploma  
5 113 Brunel, *Management studies*, MBA  
5 114 Brunel, *Management studies*, MSc/Diploma  
5 115 Brunel, *Project management* MSc  
5 116 City, *Business administration* MBA 1c yr f t 2c yrs p t preparation for career in commercial and industrial management also p g education for entry to admin employment in specialist area or for
- 5 117 . . . . .  
tional commercial and human aspects of subj computing fundamentals data processing
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5 126 Durham, *Management studies*, MSc  
5 127 Ealing CHE, *Manpower studies*, MA  
5 128 Edinburgh, *Business administration* MBA/Diploma See page 70  
5 129 Edinburgh, *Business administration* MBA/Diploma See page 70  
5 130 Essex, *Business economics* MA  
5 131 Exeter, *International business legal studies*, LLMB  
5 132 Glasgow, *Engineering management* MEng  
5 133 Glasgow, *Industrial relations*, MPhil 1c yr f t 2c yrs p t in Dept of Social and Econ Research training for students seeking industrial relations career or further academic study in field, core course industrial relations options from labour markets industrial sociol labour law labour hist personnel relations industrial democracy current issues in industrial relations assessment by essays examinations and dissertation Contact Dr Charles Woolfson  
5 134 Glasgow, *Management studies* MBA  
5 135 . . . . .
- 5 136 . . . . .  
5 137 . . . . .  
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5 139 . . . . .  
5 140 Kent, *Management*, MA  
5 141 Kent, *Management science*, MA/Diploma  
5 142 Kingston Poly, *General management* MBA (CNAAB)

- 5:143** Lancashire Poly, *Management (by action learning)*, MSc (CNA)
- 5:144** Lancaster, *Business analysis*, MA, 1c yr f-t (hons deg or equiv professional qual req); *course content*: handling and solving of problems; foundation material inc: intro economics, financial analysis, theories of organisations, marketing theory and practice, quantitative methods, computing; marketing management, management and financial accounting, operations management, management information systems, OR, industrial relations; case studies and exercises, project (ESRC, TOPS). Contact Mrs ME McClintock
- 5:145** Lancaster, *Management learning*, MA
- 5:146** Lancaster, *Marketing*, MA
- 5:147** Lancaster, *Marketing education*, MA
- 5:148** Lancaster, *Operational research*, MSc/Diploma
- 5:149** Lancaster, *Systems in management*, MA See page 73
- 5:150** Leeds, *Management studies*, MBA
- 5:151** Leicester Poly, *Business administration*, MBA
- 5:152** Leicester Poly, *Human resource management*, MA (CNA)
- 5:153** London (Imperial), *Management science*, MSc/DIC
- 5:154** London (LBS), *Business administration*, MSc
- 5:155** London (LSE), *Industrial relations and personnel management*, MSc
- 5:156** Loughborough, *Business administration*, MBA
- 5:157** Loughborough, *Labour market studies*, MA
- 5:158** Loughborough, *Recreation management*, MSc/ALUT
- 5:159** Manchester, *Business administration*, MBA/MBSc/Diploma
- 5:160** Manchester, *Industrial relations*, MA(Econ)/Diploma
- 5:161** Manchester (UMIST), *Management sciences*, MSc
- 5:162** Manchester (UMIST), *Marketing*, MSc
- 5:163** Manchester Poly, *Countryside management*, MSc/Diploma (CNA)
- 5:164** Manchester Poly, *Labour politics*, MA (CNA)
- 5:165** Manchester Poly, *Management (by action learning)*, MSc (CNA)
- 5:166** Middlesex Poly, *Business administration*, MBA (CNA)
- 5:167** Newcastle, *Industrial management*, MBA
- 5:168** NE London Poly, *Advanced management*, MSc (CNA)
- 5:169** NE London Poly, *Business administration*, MBA
- 5:170** Oxford, *Management (industrial relations)*, MSc See page 71
- 5:171** Oxford, *Management studies*, MPhil See page 71
- 5:172** Poly of Central London, *Business administration*, MBA (CNA)
- 5:173** Poly of Central London, *Manpower studies*, MA (CNA)
- 5:174** Poly of North London, *Leisure and recreation studies*, MA (CNA)
- 5:175** Reading, *International business and economic development*, MA
- 5:176** Reading, *International business and economic integration*, MA
- 5:177** Reading, *International business and international financial management*, MA
- 5:178** Reading, *Project management*, MSc/Diploma
- 5:179** Royal CA, *Marketing and export studies*, MA
- 5:180** St Andrews, *Management, economics, politics*, MLitt/MPhil/Diploma
- 5:181** Salford, *Employment studies*, MSc/Diploma
- 5:182** Salford, *Marketing and a foreign language*, MSc, 2 yrs p-t (deg in French, German or Spanish req); programme within modular studies MA/MSc scheme (see Science, technology and society); designed for those with foreign lang qual that they wish to put to practical use in career in marketing at home or abroad; *langs available*: French, Spanish, German; *course content*: 3 modules in marketing, 3 lang-related modules; exam and dissertation. Contact Administrative Officer, Department of Modern Languages
- 5:183** Sheffield, *Business studies*, MBA/Diploma
- 5:184** Sheffield, *Leisure management*, MA
- 5:185** Sheffield City Poly, *Management information systems*, MSc (CNA)
- 5:186** Sheffield City Poly, *Management studies*, MSc/MBA (CNA)
- 5:187** Sheffield City Poly, *Organisation development*, MSc (CNA)
- 5:188** Slough CHE, *Personnel management*, MSc (CNA)

- [illegible]

### Certificates and diplomas

- |       |  |
|-------|--|
| 5 222 | Belfast, <i>Business administration</i> , Diploma  |
| 5 223 | Birmingham, <i>Business administration</i> Diploma |
| 5 224 | Birmingham, <i>Commerce</i> , Diploma              |
| 5 225 | .....  |
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| 5 230 | ..... Diploma                                      |
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| 5 237 | ..... Diploma                                      |
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- 5:241 City, *Engineering management*, Diploma
- 5:242 City of London Poly, *Business studies*, Certificate
- 5:243 City of London Poly, *Management studies*, DMS (CNA A)
- 5:244 Cornwall CF & HE, *Management studies*, DMS (CNA A)
- 5:245 Coventry (Lanchester) Poly, *Employment relations*, Diploma
- 5:246 Coventry (Lanchester) Poly, *Management studies*, DMS (CNA A)
- 5:247 Crewe and Alsager CHE, *Business studies*, Certificate
- 5:248 Croydon C, *Bilingual secretarial studies*, Diploma
- 5:249 Croydon C, *Management studies*, DMS (CNA A)
- 5:250 Croydon C, *Personal assistants' studies*, Diploma
- 5:251 Derbyshire CHE (Derby), *Bilingual secretarial studies*, Diploma
- 5:252 Derbyshire CHE (Derby), *Management studies*, DMS (CNA A)
- 5:253 Dorchester Met IHE, *Management studies*, DMS (CNA A)
- 5:254 Dorset IHE (Poole), *Management studies*, DMS (CNA A)
- 5:255 Dundee CT, *Management studies*, DMS (CNA A)
- 5:256 Dunfermline CPE, *Recreation and leisure practice*, Diploma (CNA A)
- 5:257 Ealing CHE, *Management studies*, DMS (CNA A)
- 5:258 Ealing CHE, *Personnel management*, Diploma
- 5:259 Ealing CHE, *Secretarial and European language studies*, Diploma
- 5:260 Ealing CHE, *Secretarial and management studies*, Diploma
- 5:261 Essex IHE, *Management studies (education)*, DMS (CNA A)
- 5:262 Exeter C, *Management studies*, DMS (CNA A)
- 5:263 Farnborough CT, *Management studies*, DMS (CNA A)
- 5:264 Glasgow CT, *Industrial administration*, Diploma (SCOTVEC), 1 yr f-t (deg, HND or equiv qual req); vocational education for career in marketing or production management; *course inc:* business environment, business stats, financial aspects of management, organisational behaviour, marketing, management of manpower, operations management. Contact Admissions Officer
- 5:265 Glasgow CT, *Management studies*, DMS (CNA A), 2 yrs p-t (deg or equiv qual req, candidate over 27 with approp experience may be admitted); *course content: stage 1:* applied economics, organisations and management I and II; quantitative techniques; accounting and finance for managers I; law; human resource management; management of information technology I; *stage 2:* marketing I; operations I; management of information technology II; business policy; project options in 1 subj from accounting and finance for managers II; public sector accounting; option i 2 subjs from operations management II; marketing II; management and admin in public sector risk management; business modelling; international business. Contact Admissions Officer
- 5:266 Glasgow CT, *Personnel management*, Diploma (SCOTVEC)
- 5:267 Gloucestershire CAT (Gloucester), *Management studies*, DMS (CNA A)
- 5:268 Gwent CHE (Newport), *Management studies*, DMS (CNA A)
- 5:269 Gwent CHE (Newport), *Management studies (human resource management)*, Diploma (Wales)
- 5:270 Gwent CHE (Newport), *Management studies (personnel management)*, Diploma
- 5:271 Harlow C, *Management studies*, DMS (CNA A)
- 5:272 Hatfield Poly, *Management studies*, DMS (CNA A)
- 5:273 Heriot-Watt, *Management*, Diploma, 1 yr f-t (hons deg plus 6 mths' relevant experience req) aims to develop knowledge of inter-relationship of all aspects of business and awareness of interdependence of govt, business and society; develops broad understanding of admin and business problems and ability to work effectively with others; *course content:* management principles and practice; *plus 4 of:* behavioural studies, financial and managerial accounting, production management, communication studies, marketing, economics, computer studies; dissertation. Contact Professor A Keenan
- 5:274 Huddersfield Poly, *Management studies*, DMS (CNA A)
- 5:275 Hull, *Operational research*, Diploma
- 5:276 Humberside CHE (Hull), *Management studies*, DMS (CNA A)
- 5:277 Kent, *Quantitative aspects of management*, Diploma
- 5:278 Kingston Poly, *Management studies*, DMS (CNA A)
- 5:279 Kingston Poly, *Marketing*, Diploma (CNA A)
- 5:280 Lancashire Poly, *Bilingual executive assistant studies*, Diploma, 1 yr f-t (deg or equiv in any discipline with min A-level standard in French req); *course content:* 2 langs (French and 1 o

- 5 281  
 5 282 Lancaster, *Business analysis*, Diploma  
 5 283 Leeds Poly, *Administration studies*, Diploma  
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 5 288 Leeds Poly, *Secretarial studies*, Diploma  
 5 289 Leicester Poly, *Management studies* DMS (CNAAB)  
 5 290 Lincoln CT, *Management studies*, DMS (CNAAB)  
 5 291 Lincoln CT, *Personal assistants' studies* Diploma (RSA)  
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Freeport Edinburgh EH14 0PA

- 5 312 New C (Durham), *Bilingual secretarial studies*, Diploma  
 5 313 Newcastle Poly, *Bilingual secretarial administration*, Diploma  
 5 314 Newcastle Poly, *Business information technology*, Diploma (CNAAB)

Humanities

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- 5:315 Newcastle Poly, *Management studies*, DMS (CNAА)
- 5:316 Newcastle Poly, *Management studies (construction)*, DMS (CNAА)
- 5:317 Newcastle Poly, *Management studies (public administration)*, DMS (CNAА)
- 5:318 Newcastle Poly, *Marketing studies*, Diploma (CNAА)
- 5:319 Newcastle Poly, *Secretarial administration*, Diploma
- 5:320 Norfolk CA & T, *Management studies*, DMS (CNAА)
- 5:321 NE London Poly, *Industrial relations and personnel management*, Diploma (CNAА)
- 5:322 NE London Poly, *Management*, Diploma
- 5:323 NE London Poly, *Management studies (education)*, DMS (CNAА)
- 5:324 NE London Poly, *Management studies (general)*, DMS (CNAА)
- 5:325 NE London Poly, *Management studies (local government)*, DMS (CNAА)
- 5:326 NE London Poly, *Management studies (manufacturing management)*, DMS (CNAА)
- 5:327 NE London Poly, *Management studies (marketing management)*, DMS (CNAА)
- 5:328 N Lindsey CT (Scunthorpe), *Management studies*, DMS (CNAА)
- 5:329 N Staffs Poly, *International marketing*, Diploma (CNAА)
- 5:330 N Staffs Poly, *Management studies*, DMS (CNAА)
- 5:331 N Staffs Poly, *Management studies*, Diploma (CNAА)
- 5:332 N Staffs Poly, *Marketing management*, Diploma (CNAА)
- 5:333 Norwich City CF & HE, *Management studies*, DMS (CNAА)
- 5:334 Norwich City CF & HE, *Management studies (education)*, DMS (CNAА)
- 5:335 Norwich City CF & HE, *Personal assistants' studies*, Diploma
- 5:336 Oxford, *Management studies*, Certificate
- 5:337 Oxford Poly, *Management studies*, DMS (CNAА)
- 5:338 Plymouth Poly, *Management studies*, DMS (CNAА), 2 yrs p-t (deg or equiv qual normally req plus age of 23, those over 27 with at least 4 yrs' professional or admin experience considered) *stage 1*: environment and organisation: econ, legal and social environment; quantitative management: maths and stats for business, management accounting; management practice: operational planning and control, marketing; exams; *stage 2*: business policy and decision making, management practice; exams, project. Contact Academic Registrar
- 5:339 Plymouth Poly, *Management studies (shipping)*, DMS (CNAА)
- 5:340 Poly of Central London, *Industrial relations and labour law*, Diploma
- 5:341 Poly of Central London, *Management studies*, DMS
- 5:342 Poly of Central London, *Marketing*, Diploma
- 5:343 Poly of Central London, *Modern office studies and secretarial studies*, Diploma
- 5:344 Poly of Central London, *Personal and administrative assistants' study*, Diploma
- 5:345 Poly of Central London, *Personnel management*, Diploma (CNAА)
- 5:346 Poly of North London, *Labour studies*, Diploma
- 5:347 Poly of North London, *Management and administration*, Diploma
- 5:348 Poly of North London, *Management studies (recreation management)*, DMS (CNAА)
- 5:349 Poly of North London, *Planning for leisure*, Diploma
- 5:350 Poly of North London, *Purchasing and supply*, Diploma, 1 yr f-t: 2 yrs p-t (approp deg or HNC/ in business studies req); *course content*: purchasing practice and techniques, stores management and inventory control or retail merchandise management, purchasing and supply management plus at least 1 option from: materials and production planning and control, marketing, structural planning and control in public sector, contract procedures and techniques; individual research study on topic related to purchasing or allied functions; assessment by exams and in-course assignments, report on research work. Contact RSS Davis, Course Tutor
- 5:351 Poly of Wales, *Management studies*, DMS (CNAА)
- 5:352 Poly of Wales, *Management studies (health service)*, DMS (CNAА)
- 5:353 Poly of Wales, *Management studies (manufacturing)*, DMS (CNAА)
- 5:354 Poly of Wales, *Management studies (personnel management)*, Diploma
- 5:355 Poly of Wales, *Management studies (public sector)*, DMS (CNAА)
- 5:356 Portsmouth Poly, *Management studies*, DMS (CNAА)
- 5:357 Robert Gordon's IT (Aberdeen), *Management studies*, DMS (CNAА)
- 5:358 Robert Gordon's IT (Aberdeen), *Personnel administration*, Diploma (CNAА)
- 5:359 St Helens CT, *Management studies*, DMS (CNAА)





UNIVERSITY OF STIRLING

# BUSINESS/MANAGEMENT/ ACCOUNTANCY POSTGRADUATE COURSEWORK PROGRAMMES

**MBA/DipBus Admin**

**MBA/DipBusAdmin (Retail  
Studies)**

**MBA/DipBusAdmin  
(Management Information  
Systems)**

**MBA/DipBusAdmin (Industrial  
Relations & Personnel  
Management)**

**MBA/DipBusAdmin (Industry  
and Employment in Newly  
Industrialising Countries)**

**MBA/DipBusAdmin (Banking)**

**MBA/DipBusAdmin (Finance)**

**MBA/DipBusAdmin (Marketing)**

The MBA may be general or allow  
candidates complete units and a  
project in the specialist areas listed.

**MSc/Diploma Entrepreneurial  
Studies**

**MSc/Diploma Accounting &  
Finance**

**MSc/Diploma Technological  
Economics**

**MSc/Diploma Industrial  
Relations**

**Diploma in Professional  
Accountancy**

## **MASTERS PROGRAMMES**

Comprises 8 months' taught  
courses plus a 4-month project/  
dissertation

**DIPLOMA** courses comprise 8  
months of taught instruction

PhD and MSc by research are  
also offered in Business Studies,  
Accounting & Finance,  
Economics and Management  
Science.

Founded in 1967, Stirling is a  
modern, innovative university set  
in one of the finest campuses in  
Europe, adjacent to Glasgow  
and Edinburgh and on a main rail  
link to London.

For further information and  
application form contact:—

**The Admissions Officer  
University of Stirling  
Stirling FK9 4LA  
Scotland**

# Master's Programme in Management & Business Studies

The London Business School offers a Master's Programme (lasting 21 months full time or 36 months part time), which is equivalent to a two year MBA Programme at leading US business schools

## Admission

All applicants must complete a detailed application form, provide two references, take the Graduate Management Test (GMAT) and, if short listed, attend an interview



**London  
Business  
School**

### Further Information

**London Business School**

**Sussex Place, Regent's Park, London NW1 4SA**

Telephone 01 262 5050 Telex 27461 (LBSKX G)

Please address correspondence to either  
*The Registrar, Full time Master's Programme*  
or *The Registrar, Part time Master's Programme*

# UNIVERSITY OF BATH School of Management

## MSc in Business Administration

(12 months or part-time)

A course on the overall direction of enterprises focusing upon strategy and policy issues

## MPhil and PhD by Research

Research full time or part time into any area of Business or Management. The School is also always interested in considering approaches from individual organisations for help in meeting their specific management development needs

For further information please contact

The Administrative Officer

School of Management

University of Bath

Claverton Down

Bath BA2 7AY

Telephone Bath (0225) 826826



# THE CITY UNIVERSITY BUSINESS SCHOOL

## One year intensive MBA Courses in:

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\* **Marketing**

**Computer Management**

**Export Management and International Business**

\* **Industrial Relations and Personnel Management**

Plus an MSc degree in Business Systems Analysis and Design.

\* Part-time courses (2 years) are also available.

Applicants must possess either a first or second class honours degree or an equivalent professional qualification and will normally be required to take the Graduate Management Admission Test (GMAT).

The courses begin in October 1986; for more information please contact the Admissions Officer:

The City University Business School, Frobisher Crescent, Barbican Centre, London EC2Y 8HB.

Telephone: 01-920 0111 Ext 234.

SCOTTISH  
BUSINESS  
SCHOOL



EDINBURGH  
UNIVERSITY  
DIVISION

## UNIVERSITY OF EDINBURGH

### ONE-YEAR MBA PROGRAMME

The Edinburgh Division of the Scottish Business School is one of the oldest-established Departments of Business Studies in the United Kingdom, and has had a successful Master's programme for many years. The Division prides itself on its wide international connections with Europe, North America, Africa and the Asian Pacific Region.

The Edinburgh Master in Business Administration (MBA) is an intensive 12-month course designed to cut across the boundaries of conventional professional and academic disciplines. Whatever type of work you eventually do, an MBA will broaden your view.

During the first term students all take the same course in economics, accounting, organisational behaviour, statistics, computing, business policy and business law. In the second and third terms the core of the programme is provided by a study of general management. In addition participants choose four electives (management accounting, business economics, business finance, personnel management, industrial relations, management science, international business, general marketing and market research) for greater specialisation. All MBA candidates write a dissertation at the end of the taught programme.

#### Awards and Grant Applications

SED and ESRC awards are available to well qualified students.

Course details and application forms available from:

**Director, MBA Programme, Department of Business Studies,  
50 George Square, Edinburgh EH8 9JY.**



# UNIVERSITY OF SURREY

## ● TOURISM ● HOTELS ●

Postgraduate taught courses

MSc/Diploma one year full-time courses in

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primarily for applicants from outside UK

MSc/Diploma one year full-time course in

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for UK and non-UK students

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..

Management and Hotel Industries,  
XH

Telephone (0483) 571281



# The University of Oxford



## A UNIQUE OPPORTUNITY

to study management in Oxford combining the traditional methods of tuition at Oxford University and the distinctive approach to management education developed by Templeton College the Oxford Centre for Management Studies

- MPhil – two year programme in Management Studies
- MSc – one-year programme in Management (Industrial Relations)
- MLitt/DPHil – research degrees in Management or Industrial Relations

For brochure and application forms write to

**Applications Secretary**

**Management & Industrial Relations Applications Committee**

c/o Templeton College

Kennington

Oxford OX1 5NY

Telephone Oxford (0865) 735422

**STRATHCLYDE BUSINESS SCHOOL** offers a wide postgraduate programme, spanning the whole spectrum of management education. The School comprises 12 University Departments and Research Institutes, and draws on the extensive academic and technological resources of a modern university facility. The full menu of the programme is as follows:—

**MBA & PG Dip:—** Business Administration.

**MCom & PG Dip:—** Marketing for Industrialising Countries.

**MSc and Postgraduate Diplomas:—** Business Information Technology Systems; Careers Guidance & Employment Counselling; Development Planning; Financial Studies; Hotel Administration; Industrial Relations; Information & Library Studies; Information Management; Marketing; Marketing for Industrialising Countries; Operational Research; Personnel Management; Public Policy; Tourism; Urban and Regional Planning; Urban Development.

**Postgraduate Diplomas:—** Accountancy; Legal Practice; Secretarial Studies.

**Research:—** Extensive facilities are available for study to MSc or PhD level.

**Further Information:—** AIP Administrator (Ref CRAC)  
Strathclyde Business School  
130 Rottenrow, Glasgow G4 0GE

## Cranfield

### MA in European Management

This degree is aimed at graduates of French or German who wish to pursue a career in business but who have not specifically followed a course orientated towards business studies

The course is 12 months in duration at one of the country's leading University Business Schools. The first half of the programme concentrates on five main areas — the basic elements of business management, the business environment in France and Germany, economic aspects of the EEC countries, EEC structures and policies, business French and German

During the second half students take a number of elective courses from the selection offered on the full-time MBA programme, submit a short research project and continue their language studies

For further information contact

**Colin Gordon**  
Cranfield School of Management  
Cranfield  
Bedford MK43 0AL  
Telephone Bedford (0234) 751122  
Telex 826559

**Cranfield**   
School of Management

### THE UNIVERSITY OF HULL

#### Department of Management Systems and Sciences



MA/MSc/Diploma. 1 yr f-t (MA/MSc)  
9mths f-t (Diploma)

**Entry requirements** Hons degree in Management/ Business or suitable social science for MA and in OR/ Management Science for MSc. Any appropriate hons degree for Diploma

**Course content MA in Management Systems** organisational analysis; systems approaches to managerial problem solving; decision support systems; management information and control; innovation and consulting in organisations; plus two or three from language; policy analysis; system dynamics and public services.

**Course content MSc in Management Sciences** organisational analysis or operational research; systems approaches to problem solving; decision support systems; forecasting; belief, evidence & decision; consulting in organisations; plus two from manufacturing systems; system dynamics; public services; policy analysis. *Both MA/MSc entail a project/ dissertation during the period May to September.*

**Course content Diploma** 5 courses from operational research, mathematical techniques of OR, mathematical modelling, operations management, corporate planning, policy analysis, administrative behaviour, organisation development, organisations as systems, systems thinking, management cybernetics. Contact Mr M C Jackson, Department of Management Systems and Sciences, University of Hull, Hull HU6 7RX. Telephone (0482) 465731 or Departmental Secretary on (0482) 466236.

**Imperial College of  
Science and Technology**  
(University of London)  
Department of Social and  
Economic Studies

**A New MSc TECHNOLOGY AND  
INDUSTRIAL ORGANISATION**

This course examines the economic and social issues which arise from changes in technology and industrial organisation and combines theoretical analysis with practical understanding. The course is for full time and part time students and begins in October. This course is accepted by Research Councils as suitable for tenure of studentships. Applications are invited from good graduates in social science, engineering and science. Work experience desirable but not essential.

Opportunities for research studentships are also available. Applications are particularly welcome from students who wish to study subjects at the interface between science, engineering, industry and society for example through a concern with new technology, health and safety at work, investment behaviour.

For further particulars and application forms please write to: The Postgraduate Tutor, Department of Social and Economic Studies, Imperial College, 52/53, Princes Gate, Exhibition Road, London SW7 2PG.

**University of Lancaster**  
**Postgraduate Course in  
Information Management**

A 12 month programme leading to the degree of MSc in Information Management is offered each year commencing in October by the School of Management and Organisational Sciences.

Aimed at graduates not necessarily with computer training but probably with management interests, the course is generally for those who wish to develop careers in **Information Management**, the task of ensuring that enterprises of all kinds make best use of their resources for generating and using information.

The course is part taught but includes a project component leading to a dissertation. The Science and Engineering Research Council has accepted the course as suitable for the tenure of its advanced course studentships.

For details write to:  
Gill Williams, Department of Systems  
(Ref 72) University of Lancaster  
Lancaster LA1 4YX  
Telephone (0524) 65201 ext 4488

**School of Management and  
Organisational Sciences**  
**University of Lancaster**

**One year MA in  
Systems in Management**

A unique and innovative course designed to tackle a wide range of problems in any type of organisation, from small business to multinational corporations and public services.

Nine years research involving well over 30 projects forms the basis for this demanding 12 month course. This research has developed and refined methodologies which systems thinking provides a means for analysing human activities and identifying the procedural and communications weaknesses which underlie many complex problems. The *Specialisation of requirements for operational and management information systems* is a particularly applicable area.

The course combines both hard and soft aspects of the behavioural sciences, focusing on the complex world of human organisation.

Applications normally have to be accompanied by a relevant professional qualification or preferably coupled with experience of working in an organisation.

For details write to:  
Gill Williams, Department of Systems  
(Ref 73) University of Lancaster  
Lancaster LA1 4YX  
Telephone (0524) 65201 ext 4488

**UNIVERSITY OF  
MANCHESTER**  
**INSTITUTE OF SCIENCE  
AND TECHNOLOGY**

**Department of Management Sciences**

The department offers one year taught MSc courses and research opportunities in:

- Business Economics
- Business Finance
- Industrial Relations & Personnel Policies
- International Business
- Marketing
- Operations Management
- Organisational Psychology

*Please write to*  
The Postgraduate Admissions Officer  
Department of Management Sciences  
UMIST  
PO Box 88  
Manchester M60 1QD





## NAPIER COLLEGE EDINBURGH

### POSTGRADUATE AND PROFESSIONAL COURSES

Accounting  
Biology of Water Management  
Careers Guidance  
Chemistry  
European Marketing and Languages  
Industrial Administration  
Information Technology (Computer Aided Engineering)  
Management Studies  
Personnel Management  
Public Administration  
Purchasing and Supply  
Secretarial Studies  
Software Technology  
Systems Analysis and Design  
Transportation Engineering  
Transportation Planning in Developing Countries

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Postgraduate prospectus from The Information Office, Napier College, Freepost, Edinburgh EH14 0PA  
Telephone 031-444 2266 ext 4330

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Develop your knowledge of business and management by taking the Strathclyde Master of Business Administration Degree - 12 months Full time 36 months Part-time or by Distance Learning over a flexible period of up to five years (UK only)

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For further details please contact  
The MBA Administrator  
Strathclyde Business School University of Strathclyde  
130 Rottenrow GLASGOW G4 0GE Tel 041-552 7141

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UNIVERSITY



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*A specialist degree equipping students to improve the process of decision making, planning, organisation and control in industry, commerce and government.*

### **MA** Industrial Relations

*Provides an understanding of institutions and issues in British industrial relations, broadly defined, and develops a systematic approach to comparative and theoretical issues.*

Further information from: Nina Stone (quoting MBA, MSc or MA), School of Industrial and Business Studies, University of Warwick, Coventry CV4 7AL, tel. (0203) 523922



## MASTER IN BUSINESS ADMINISTRATION

A one-year programme of study at the **University College of Wales, Aberystwyth** offering the successful applicant flexibility in the choice of courses. A core programme suitable for those without relevant qualifications is available and the opportunity of specialisation for those with relevant qualifications or experience is provided by means of electives.

The combination of courses in the core programme may be modified at the candidate's request and with the approval of the Directors.

### Core

Accounting and Finance  
Business Law

### Electives

•  
•  
•  
•

A total of six taught courses will be taken, followed by a three-month dissertation. An attractive feature of the programme for those applicants with relevant qualifications is the ability to specialise by choosing from a large number of options available in any of the core areas with an asterisk above, such as **Advanced Farm Management and Production Theory and Agricultural and Food Marketing in Developing Countries** in the core area of **Agricultural Marketing and Agricultural Business**.

For further information write to Dr C Emmanuel (P6) Co-Director MBA Programme, University College of Wales, Aberystwyth, Dyfed SY23 3DB, UK, Telephone (0970) 3111 Extension 3445 Telex 35181.

Application forms are available from the Registrar, Admissions Office, Old College, King Street, Aberystwyth, SY23 2AX.

## List of chapter headings and numbers

on pages  
42 and 43

## North-East Surrey College of Technology

### INTENSIVE SECRETARIAL AND INFORMATION PROCESSING

Certificate/Diploma RSA 2 terms full time  
22 places

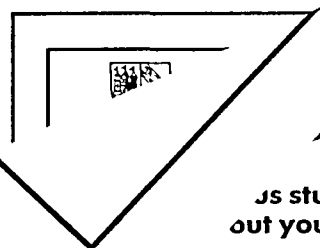
This course is a preparation for personal assistant and executive secretarial positions in industry and commerce. Subjects studied are shorthand, type writing, transcription, business background, communications, law, secretarial duties and word processing.

up-to-date equipment

Entrance requirements: Degree or equivalent  
Grant LEA

Further information from

Course Tutor, Mrs V G Webb, North East Surrey  
College of Technology, Regent Road, Ewell,  
Surrey KT17 3DS



are

**As studying for an MSc and we'll help you get the  
out your future career.**

Our science course is designed to equip you with managerial skills, in particular develop an analytical approach to management problems. With the practical insight you will gain into different aspects of business operation, you will acquire the knowledge necessary to make an effective career choice.

### **Design your own study programme**

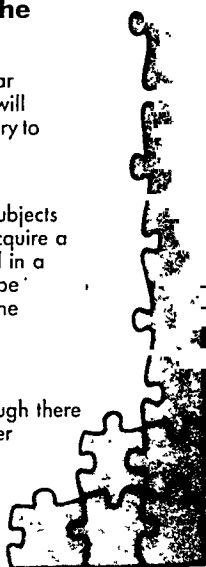
The 12-month programme is divided into three sections, compulsory core subjects, elective subjects and an individual project. You can choose whether you want to specialise in one area or acquire a broader base of knowledge. Your project will give you a chance to become closely involved in a field of particular interest to yourself. Many of the projects are problem-orientated and may be carried out in collaboration with industry. This will give you the experience of implementing the knowledge you have acquired.

### **What sort of students do we want?**

We are looking for applicants with a good honours degree and preferably some business experience. Many of our students are graduates in science, engineering and economics, though there are no constraints on the discipline of your first degree. A number of SERC awards and other sources of financial support are available to suitably qualified candidates.



For course details and application forms write to:  
The Admissions Secretary, **Department of Management Science,**  
**Imperial College of Science and Technology,**  
Exhibition Road, London SW7 2BX (Telephone: 01-589 5111)



Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

61 Belfast, Accounting, MSc/PhD

62 P. ... .. , 1900-1901, 1902-1903, 1904-1905, 1906-1907, 1908-1909, 1910-1911, 1912-1913, 1914-1915, 1916-1917, 1918-1919, 1920-1921, 1922-1923, 1924-1925, 1926-1927, 1928-1929, 1930-1931, 1932-1933, 1934-1935, 1936-1937, 1938-1939, 1940-1941, 1942-1943, 1944-1945, 1946-1947, 1948-1949, 1950-1951, 1952-1953, 1954-1955, 1956-1957, 1958-1959, 1960-1961, 1962-1963, 1964-1965, 1966-1967, 1968-1969, 1970-1971, 1972-1973, 1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, 2002-2003, 2004-2005, 2006-2007, 2008-2009, 2010-2011, 2012-2013, 2014-2015, 2016-2017, 2018-2019, 2020-2021, 2022-2023, 2024-2025, 2026-2027, 2028-2029, 2030-2031, 2032-2033, 2034-2035, 2036-2037, 2038-2039, 2040-2041, 2042-2043, 2044-2045, 2046-2047, 2048-2049, 2050-2051, 2052-2053, 2054-2055, 2056-2057, 2058-2059, 2060-2061, 2062-2063, 2064-2065, 2066-2067, 2068-2069, 2070-2071, 2072-2073, 2074-2075, 2076-2077, 2078-2079, 2080-2081, 2082-2083, 2084-2085, 2086-2087, 2088-2089, 2090-2091, 2092-2093, 2094-2095, 2096-2097, 2098-2099, 2100-2101, 2102-2103, 2104-2105, 2106-2107, 2108-2109, 2110-2111, 2112-2113, 2114-2115, 2116-2117, 2118-2119, 2120-2121, 2122-2123, 2124-2125, 2126-2127, 2128-2129, 2130-2131, 2132-2133, 2134-2135, 2136-2137, 2138-2139, 2140-2141, 2142-2143, 2144-2145, 2146-2147, 2148-2149, 2150-2151, 2152-2153, 2154-2155, 2156-2157, 2158-2159, 2160-2161, 2162-2163, 2164-2165, 2166-2167, 2168-2169, 2170-2171, 2172-2173, 2174-2175, 2176-2177, 2178-2179, 2180-2181, 2182-2183, 2184-2185, 2186-2187, 2188-2189, 2190-2191, 2192-2193, 2194-2195, 2196-2197, 2198-2199, 2200-2201, 2202-2203, 2204-2205, 2206-2207, 2208-2209, 2210-2211, 2212-2213, 2214-2215, 2216-2217, 2218-2219, 2220-2221, 2222-2223, 2224-2225, 2226-2227, 2228-2229, 2230-2231, 2232-2233, 2234-2235, 2236-2237, 2238-2239, 2240-2241, 2242-2243, 2244-2245, 2246-2247, 2248-2249, 2250-2251, 2252-2253, 2254-2255, 2256-2257, 2258-2259, 2260-2261, 2262-2263, 2264-2265, 2266-2267, 2268-2269, 2270-2271, 2272-2273, 2274-2275, 2276-2277, 2278-2279, 2280-2281, 2282-2283, 2284-2285, 2286-2287, 2288-2289, 2290-2291, 2292-2293, 2294-2295, 2296-2297, 2298-2299, 2300-2301, 2302-2303, 2304-2305, 2306-2307, 2308-2309, 2310-2311, 2312-2313, 2314-2315, 2316-2317, 2318-2319, 2320-2321, 2322-2323, 2324-2325, 2326-2327, 2328-2329, 2330-2331, 2332-2333, 2334-2335, 2336-2337, 2338-2339, 2340-2341, 2342-2343, 2344-2345, 2346-2347, 2348-2349, 2350-2351, 2352-2353, 2354-2355, 2356-2357, 2358-2359, 2360-2361, 2362-2363, 2364-2365, 2366-2367, 2368-2369, 2370-2371, 2372-2373, 2374-2375, 2376-2377, 2378-2379, 2380-2381, 2382-2383, 2384-2385, 2386-2387, 2388-2389, 2390-2391, 2392-2393, 2394-2395, 2396-2397, 2398-2399, 2400-2401, 2402-2403, 2404-2405, 2406-2407, 2408-2409, 2410-2411, 2412-2413, 2414-2415, 2416-2417, 2418-2419, 2420-2421, 2422-2423, 2424-2425, 2426-2427, 2428-2429, 2430-2431, 2432-2433, 2434-2435, 2436-2437, 2438-2439, 2440-2441, 2442-2443, 2444-2445, 2446-2447, 2448-2449, 2450-2451, 2452-2453, 2454-2455, 2456-2457, 2458-2459, 2460-2461, 2462-2463, 2464-2465, 2466-2467, 2468-2469, 2470-2471, 2472-2473, 2474-2475, 2476-2477, 2478-2479, 2480-2481, 2482-2483, 2484-2485, 2486-2487, 2488-2489, 2490-2491, 2492-2493, 2494-2495, 2496-2497, 2498-2499, 2500-2501, 2502-2503, 2504-2505, 2506-2507, 2508-2509, 2510-2511, 2512-2513, 2514-2515, 2516-2517, 2518-2519, 2520-2521, 2522-2523, 2524-2525, 2526-2527, 2528-2529, 2530-2531, 2532-2533, 2534-2535, 2536-2537, 2538-2539, 2540-2541, 2542-2543, 2544-2545, 2546-2547, 2548-2549, 2550-2551, 2552-2553, 2554-2555, 2556-2557, 2558-2559, 2560-2561, 2562-2563, 2564-2565, 2566-2567, 2568-2569, 2570-2571, 2572-2573, 2574-2575, 2576-2577, 2578-2579, 2580-2581, 2582-2583, 2584-2585, 2586-2587, 2588-2589, 2590-2591, 2592-2593, 2594-2595, 2596-2597, 2598-2599, 2600-2601, 2602-2603, 2604-2605, 2606-2607, 2608-2609, 2610-2611, 2612-2613, 2614-2615, 2616-2617, 2618-2619, 2620-2621, 2622-2623, 2624-2625, 2626-2627, 2628-2629, 2630-2631, 2632-2633, 2634-2635, 2636-2637, 2638-2639, 2640-2641, 2642-26

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6.7  $\hat{\sigma}_1$  is the standard deviation of the first fold of the paper.

1. *Journal of the American Medical Association*, 1997; 277: 1033-1037.

1.  $\mathcal{H}^1$  is a linear space.

1. *Journal of the American Medical Association*, 2000; 283: 2686-2692.

6.8 City, Management studies, MPhil/PhD

69 11 12

611 The results are shown in Figure 7.

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change in response to changes in technology, management information systems, management control systems, systems analysis and information theory, financial planning and quantitative aspects of accounting and finance financial simulation models, optimising models, financial forecasting models, models dealing with risk and uncertainty, integrated planning systems impact of behavioural and organisation theory in accounting and finance Contact Senior Administrative Assistant

**14 Edinburgh, Accounting, MPhil/PhD**

5.15 Exeter, Economics, MPhil/PhD

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Exhausted!

accounting. The course concludes with a supervised dissertation, typically an empirical investigation of a topic of financial interest.

For further information, see:

**MSc IN INTERNATIONAL BANKING  
AND  
FINANCIAL STUDIES**

Further particulars and forms of application may be obtained from —  
The Department of Accountancy and Finance  
Heriot Watt University  
Mountbatten Building  
31-35 The Grassmarket  
Edinburgh EH1 2HT



Index starts on  
page 518



**Southampton**  
**THE**  
**UNIVERSITY**

A new MSc (SocSci)/Diploma course is offered. The course is specially designed to meet the needs of holders of non UK degrees or professional qualifications. It takes place over two 9-month sessions with three months' private study/vacation between them. The MSc course content includes a general core of accounting, OR, economics, quantitative methods and computing, additional units in social aspects of work, public policy, communication and management psychology, and options in the core disciplines at a more advanced level. A dissertation on any of the above topics is completed during the second session.

The existing programmes in *Financial Managerial Controls* and *Management Science* continue to operate (see listings).

For further details and an application form contact  
The Director Accounting and Management Science  
MSc/Diploma Department of Accounting and  
Management Science The University Southampton  
SO9 5NH U.K. Telephone (0703) 559122  
ext 2553/2526





- 7 36 Oxford, *Ancient history*, MLitt/DPHil  
 7 37 Portsmouth Poly, *Historical and literary studies*, MPhil/PhD (CNAAC)  
 7 38 Reading, *Classics*, MPhil/PhD  
 7 39 St Andrews, *Classics*, MPhil/PhD  
 7 40 Sheffield, *Ancient history and classical archaeology*, MPhil/PhD  
 7 41 Sheffield, *Classical studies*, MPhil/PhD  
 7 42 Southampton, *Classics*, MPhil/PhD  
 7 43 Wales (Aberystwyth), *Classics*, MA/PhD  
 7 44 Wales (Bangor), *Classics*, MA/PhD  
 7 45 Wales (Cardiff), *Classics*, MA/PhD  
 7 46 Wales (Lampeter), *Classics*, MA/PhD  
 7 47 Wales (Swansea), *Classics*, MA/PhD

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 7 48 Belfast, *Later Roman history*, MA  
 7 49 Birmingham, *Byzantine studies*, MA  
 7 50 Bristol, *Aegean and Anatolian prehistory*, MA  
 7 51 Bristol, *Late Roman studies*, MA  
 7 52 Durham, *Greek*, MA  
 7 53 Edinburgh, *Classical archaeology*, MLitt  
 7 54  
 7 55  
 7 56  
 7 57  
 7 58 Hull, *Greek studies*, MA  
 7 59 Hull, *Latin studies*, MA  
 7 60 Leeds, *Classical civilisation*, MA  
 7 61 Leeds, *Greek*, MA  
 7 62 Leeds, *Greek civilisation*, MA  
 7 63 Leeds, *Latin*, MA  
 7 64  
 7 65  
 7 66  
 7 67  
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 7 69  
 7 70  
 7 71 London (Queen Mary), *Classics*, MA  
 7 72  
 7 73  
 7 74  
 7 75 London (Westfield), *Classics*, MA  
 7 76 Newcastle, *Greek*, MA  
 7 77 Newcastle, *Greek archaeology*, MA  
 7 78 Newcastle, *Latin*, MA  
 7 79 Nottingham, *Classics*, MA  
 7 80 Oxford, *Ancient history*, MPhil/MSt  
 7 81 Oxford, *Classical archaeology*, MPhil/MSt  
 7 82 Oxford, *Classical Armenian studies*, MSt  
 7 83 Oxford, *Greek and Latin languages and literature*, MPhil  
 7 84 Oxford, *Greek and/or Latin languages and literature*, MSt



## 8 Communication studies

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section

- 8 1 Bristol, *Drama*, MA/MLitt/PhD  
 8 2  
 8 3  
 8 4  
 8 5 Kent, *Film studies*, MA/PhD  
 8 6 Leeds, *Television*, MPhil/PhD  
 8 7 Leicester, *Mass communication research*, MPhil/PhD  
 8 8  
 8 9  
 8 10  
 8 11  
 8 12 Poly of Central London, *Mass media*, MPhil/PhD (CNAAB)  
 8 13 Poly of Central London, *Photographic arts*, MPhil/PhD (CNAAB)  
 8 14 Poly of Central London, *Photographic sciences*, MPhil/PhD (CNAAB)  
 8 15 Poly of Wales, *Behavioural and communication studies*, MPhil/PhD (CNAAB)  
 8 16 Royal CA, *Film and television*, MA/PhD  
 8 17  
 8 18

Board of Canada, study of radio and television esp broadcast drama news documentary and

- 8 19  
 8 20 Wales (Cardiff), *Education*, MEd/PhD  
 8 21 York, *Communication studies*, MPhil/DPhil

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses

- 8 22  
 8 23  
 8 24 preparation for entry to newspaper  
 Clothier  
 8 25 East Anglia, *Film studies* MA  
 8 26

- 8:27 London (Inst Ed), *Film and television studies for education*, MA
- 8:28 London (Inst Neurology), *Human communication*, MSc
- 8:29 Newcastle, *Hispanic drama and film*, MA
- 8:30 Poly of Central London, *Film studies*, MA/Diploma (CNAA)
- 8:31 Royal CA, *Film and television*, MA
- 8:32 Sheffield City Poly, *Communication studies*, MA (CNAA)
- 8:33 Sunderland Poly, *Communication studies*, MA/Diploma (CNAA)
- 8:34 Wales (Cardiff), *Journalism*, MA
- 8:35 Wales (Lampeter), *English*, MA

## Certificates and diplomas

- 8:36 Bristol, *Radio, film and television*, Certificate
- 8:37 Bristol Poly, *Communication and cultural studies*, Diploma/Certificate
- 8:38 City, *Clinical communication studies*, Diploma
- 8:39 Croydon C, *Media studies (film and animation)*, Diploma
- 8:40 Lancashire Poly, *Radio and television jobs*, Diploma, 1 yr f-t (deg usually req, non-grads d); aims to provide professional training and academic background to give basic k. immediately productive in radio or experience and training bus: p dio and televi journalism, ability to be s (jour oadcasting), academic board on; in term 2 several o and cal radio. Contact J
- 8:41 London (Gold ic
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- 8:43 Middlesex Po
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- 8:46 Sunderland
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- 8:48 Wales (Cardi

# Overseas students

See editorial on page 7 onwards for information on UK postgraduate study

## CORNWALL COLLEGE OF FURTHER AND HIGHER EDUCATION

### CNA Postgraduate Diploma in Radio Journalism

This one year full time course is fully recognised by the Joint Advisory Committee for the Training of Radio Journalists (JAC TRJ). Graduate level qualifications or substantial industrial experience are also acceptable. Perfect the student should also possess or be in the process of obtaining a current driving licence. The course is linked to radio newsroom practice and trial attachment are an important feature.

#### Contact

Peter Cavanagh  
Radio Journalism Course Tutor  
Cornwall College of F & H E,  
Killigrew Street,  
Falmouth,  
Cornwall TR11 3QS

## 9 Development studies

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 9:1 **Bath**, *Development studies*, MPhil/PhD
- 9:2 **Birmingham**, *Accounting and finance*, MSocSc/MPhil/PhD
- 9:3 **Bradford**, *Development and project planning*, MPhil/PhD
- 9:4 **East Anglia**, *Development studies*, MPhil/PhD; supervision available for research; sp interests in: international econ order and problems of under-development; econ development policies; planning and implementation; agricultural/rural development planning; farming systems planning; use and planning of natural resources (water and natural resource development and conservation, land use planning in arid and semi-arid areas, erosion causes and control, natural resource economics); issues of social and political change; social policy and admin; population and manpower in developing countries; staff research and professional expertise cover all major areas of developing world.
- 9:5 **Essex**, *Economics*, MPhil/PhD
- 9:6 **Keele**, *Economics*, MA/PhD
- 9:7 **London (Wye)**, *Agricultural economics*, MPhil/PhD
- 9:8 **Nottingham**, *Planning studies*, MPhil/PhD
- 9:9 **St Andrews**, *Economics*, MPhil/PhD
- 9:10 **Strathclyde**, *Economics*, MSc/PhD
- 9:11 **Strathclyde**, *Overseas development studies*, MSc/PhD
- 9:12 **Sussex**, *Agrarian studies*, MPhil/DPhil
- 9:13 **Sussex**, *Development studies*, MPhil/DPhil; supervision available, research projects inc: employment, wages and labour utilisation in context of internationalisation of production; rural development esp rural poverty in S Asia and Africa inc rural appraisal; irrigation management; food policies, agricultural science and technology, rural development planning; development economics with sp interest in problems of employment, unemployment, education and training; incomes policy and income distribution; political economy of S African region; political factors in world commodities esp copper; education and employment; mod and contemp China with sp ref to Chinese strategies and theories of development; post-harvest problems, women in agriculture; political economy of development planning esp basic human needs strategies and income distribution; international financial flows to developing countries and impact on their economies; impact of foreign investments, macroecon management; social implications of technical change in S Asian agriculture with sp ref to energy and irrigation; sociol of development. Contact Chairman, Teaching Area, IDS
- 9:14 **Wales (Aberystwyth)**, *Economics and economic history*, MSc(Econ)/PhD
- 9:15 **Wales (Swansea)**, *Development studies*, MSc/PhD

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 9:16 **Aberdeen**, *Rural and regional resources planning*, MSc
- 9:17 **Bath**, *Development studies*, MSc/Diploma
- 9:18 **Birmingham**, *Development administration*, MSocSc/Diploma
- 9:19 **Birmingham**, *Development finance*, MSocSc

88: 1 *Humanities and social sciences*

**Bradford National development and project planning MSc**

2 years full-time or 4 years part-time. The course is designed for those who wish to develop their knowledge of development studies and project planning. The course is suitable for those who have a degree in a related field or who have relevant work experience. The course is suitable for those who wish to develop their knowledge of development studies and project planning. The course is suitable for those who have a degree in a related field or who have relevant work experience.

**East Anglia Development Studies BA** 3 years full-time or 4 years part-time. The course is designed for those who wish to develop their knowledge of development studies. The course is suitable for those who have a degree in a related field or who have relevant work experience. The course is suitable for those who wish to develop their knowledge of development studies.

exams dissertation

**East Anglia Project Development BA** 3 years full-time or 4 years part-time. The course is designed for those who wish to develop their knowledge of project development. The course is suitable for those who have a degree in a related field or who have relevant work experience. The course is suitable for those who wish to develop their knowledge of project development.

project analysis agricultural development planning or rural development planning regional physical planning regional econ planning assessment of coursework exams dissertation (British Council)

**East Anglia Project Development BA** 3 years full-time or 4 years part-time. The course is designed for those who wish to develop their knowledge of project development. The course is suitable for those who have a degree in a related field or who have relevant work experience. The course is suitable for those who wish to develop their knowledge of project development.

planning regional econ planning or international econ relations or rural development admin theories of development political economy of agrarian change or contemp world development

**Essex** course content econ development theory development planning trade and development short dissertation and 1 option from wide range inc international trade economics of international monetary system resources economics public economics **Contact Dr J Frank**

**Essex Sociology of development MA/Diploma**

designed for those from developed and developing countries intending careers in econ development or wishing to expand knowledge of specialst areas see ch 13 for complementary econ planning course course content development theory 2 from economics of food and agriculture in developing countries human resources and development international economics industrialisation and technological change socialst planning quantitative methods for planning monetary and fiscal policies in developing countries project appraisal and development planning international law and development dissertation **Contact LD Smith**



- 9:36 Hull, *Sociology of developing societies*, MA
- 9:37 Keele, *Development economics*, MA/Diploma
- 9:38 Kent, *Development economics*, MA/Diploma
- 9:39 Leeds, *Civil engineering in hot climates*, MEng
- 9:40 Leeds, *Development studies*, MA
- 9:41 Leeds, *Management studies*, MBA
- 9:42 Leeds, *Political sociology of development*, MA
- 9:43 Leeds, *Public health*, MPhil
- 9:44 Leicester, *Economic development*, MA, 1c yr f-t 2c yrs p-t; *course content* theory and policy of growth in developing countries, theory of public sector economics, quantitative methods; problems of econ development in Africa and/or S Asia; public finance, international economics and development, natural resource economics; project appraisal and budgeting; urban and regional problems, economics of public enterprises, 4 exam papers, coursework assessment, dissertation  
Contact Registrar (Higher Degrees)
- 9:45 London (Imperial), *Technology and development*, MSc/DIC
- 9:46 London (Inst Ed), *Comparative education and education in developing countries*, MEd
- 9:47 London (Inst Ed), *Curriculum studies and education in developing countries*, MEd
- 9:48 London (Inst Ed), *Education in developing countries*, MA
- 9:49 London (Inst Ed), *Sociology of education and education in developing countries*, MEd
- 9:50 London (LSE), *Social planning in developing countries*, MSc/Diploma
- 9:51 London (LSH and TM), *Community health in developing countries*, MSc/School Diploma
- 9:52 London (SOAS), *Economics of public policy in developed and developing countries*, MSc
- 9:53 London (UC), *Building design for developing countries*, MSc
- 9:54 London (UC), *Economics of public policy in developed and developing countries*, MSc
- 9:55 London (UC), *Urban development planning*, MSc
- 9:56 Loughborough, *Water and waste engineering for developing countries*, MSc/ALUT
- 9:57 Manchester, *Development studies*, MA(Econ)
- 9:58 Manchester, *Human resource development*, MSc
- 9:59 Newcastle, *Architecture*, MPhil Diploma
- 9:60 Nottingham, *Environmental planning for developing countries*, MA
- 9:61 Nottingham, *Urban design for developing countries*, MA/Diploma
- 9:62 Oxford, *Development economics*, MSc
- 9:63 Reading, *Agricultural extension*, MSc/Diploma
- 9:64 Reading, *Alternative energy for developing countries*, MSc/Diploma
- 9:65 Salford, *Economic development*, MSc/Diploma, 1 yr f-t 2 yrs p-t; *course content* choice of 2 streams: theory, practice and policy of econ development, econ theory, quantitative methods, econ of project appraisal, developing countries in international monetary system, public sector economics, *hist aspects of development studies* of sp interest to those teaching or seeking preparation for research in econ hist of 3rd World, inc development economics, economics of Imperialism, econ of urban and regional development, *hist dimensions of econ development*: 3rd World social, politics and geog, assessment of coursework, exam, plus dissertation for MSc. Contact Susan Mullins
- 9:66 Salford, *Transport and development*, MSc/Diploma
- 9:67 Strathclyde, *Development economics*, MSc/Diploma
- 9:68 Strathclyde, *Development planning*, MSc/Diploma
- 9:69 Strathclyde, *Marketing for industrialising countries*, MCom/Diploma
- 9:70 Strathclyde, *Sociology of development and human resources*, MSc
- 9:71 Sunderland Poly, *Geography and development*, MA (CNA)
- 9:72 Surrey, *Producer co-operative development*, MSc/Diploma
- 9:73 Sussex, *Agrarian studies*, MA
- 9:74 Sussex, *Development studies*, MPhil, 2 yrs f-t (hons deg or equiv req, some study of economics desirable, work experience in developing country preferred); broad approach to main theories and problems in development studies and relationship between these and specific policy issues; *course content* yr 1 roots of development debate in lit on industrial revolutions of presently adv industrialised nations, application of economics, social and political science to problems of developing countries, yr 2 quantitative and qualitative research methods and stat policy, plan-

- 9.75  
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9.81 York, *Administrative science and development problems*, MSc  
9.82 York, *Project appraisal and policy analysis*, MSc/Diploma

### Certificates and diplomas

- 9.83 Birmingham, *Business administration*, Diploma  
9.84 Birmingham, *Development finance*, Diploma  
9.85 Cambridge, *Development studies*, Diploma  
9.86 East Anglia, *Trade and development*, Diploma  
9.87

economics programme and project appraisal or methods of econ research, international econ relations, agricultural policy analysis assessment of coursework exam

- 9.88 East Anglia, *Trade and development*, Diploma  
9.89 Edinburgh, *Planning studies (developing countries)*, Diploma  
9.90 Essex, *Development economics*, Diploma  
9.91

- 9.92 Kent, *Economics*, Diploma  
9.93 Kent, *Economics*, Diploma  
9.94 Lancaster, *Development economics*, Diploma  
9.95 Leeds, *Educational administration*, Diploma  
9.96 Leeds, *Educational studies*, Diploma  
9.97 Leeds, *Health planning and administration*, Diploma  
9.98  
9.99  
9.100  
9.101  
9.102 London (Wye), *Agricultural development*, Diploma  
9.103 Manchester, *Development administration*, Diploma  
9.104 Manchester, *Economic development*, Diploma  
9.105 Napier C (Edinburgh), *Transportation planning in developing countries*, Diploma  
9.106 Oxford, *Economic development*, Diploma  
9.107 Poly of Central London, *Transport and development*, Diploma  
9.108 Poly of North London, *Economic development*, Diploma

- 9:109 **Salford**, *Transport and development*, Advanced Certificate  
9:110 **South Bank Poly**, *Hospital and health service administration*, Diploma  
9:111 **Surrey**, *Economics of energy and development*, Diploma  
9:112 **Wales (Aberystwyth)**, *Comparative development studies*, Diploma  
9:113 **Wales (Swansea)**, *Development policy and planning*, Diploma  
9:114 **Wales (Swansea)**, *Social policy and administration*, Diploma  
9:115 **Warwick**, *Public administration and policy analysis*, Diploma

## UNIVERSITY OF WARWICK

### GRADUATE STUDIES IN ECONOMICS

**PhD and MPhil:** supervision from a large staff of international repute in most fields of contemporary economic theory, applied economic analysis, and econometric theory. Two ESRC Doctoral Programme Awards available each year.

#### **MA in Economics:**

one-year full-time, two-year part-time course. Normal entry requirement is a good honours degree in economics. Syllabus includes economic analysis; quantitative methods; and two specialist options from about twelve available each year; plus a dissertation. ESRC Committee Awards and other University scholarships are available for eligible candidates.

#### **Graduate Diploma in Economics:**

nine-month full-time course, intended for good honours graduates of subjects other than economics or for economists with potential whose previous training is below good honours standard.

#### **MA in Quantitative Development Economics:**

one-year full-time, two-year part-time course intended for those who have a career in government service or higher education in developing countries. Normal entry is via the Graduate Diploma but direct entry is possible with a good honours degree in either economics or statistics.

#### **Graduate Diploma in Quantitative Development Economics:**

nine-month full-time course to provide a level of tuition in economics, and development economics and statistics accessible to students who have not obtained the equivalent of a good honours degree.

*For further information and application forms write to:* Graduate Admissions Tutor, Department of Economics, University of Warwick, Coventry CV4 7AL, UK

## 10 Drama

### Higher degrees by research

#### *ate studies section*

- 10 1 Birmingham, *Drama and theatre arts*, MA/MLitt/PhD
- 10 2 Birmingham, *Shakespeare studies*, MA/MLitt/PhD
- 10 3 Bristol, *Drama*, MA/MLitt/PhD
- 10 4 East Anglia, *Drama*, MPhil/PhD
- 10 5 Glasgow, *Drama*, MLitt/PhD
- 10 6 Hull, *Drama*, MPhil/PhD
- 10 7 Kent, *Drama*, MA/PhD
- 10 8 Lancaster, *Theatre studies*, MPhil/PhD
- 10 9 London (Goldsmiths'), *Drama*, MPhil/PhD
- 10 10 London (RHBC), *Drama and theatre studies* MPhil/PhD
- 10 11 *London (Goldsmiths'), Drama*, MPhil/PhD
- 10 12 *London (Goldsmiths'), Drama*, MPhil/PhD
- 10 13 *London (Goldsmiths'), Drama*, MPhil/PhD
- 10 14 *London (Goldsmiths'), Drama*, MPhil/PhD
- 10 15 Wales (Bangor), *Drama*, MA/PhD
- 10 16 Warwick, *Theatre studies*, MA/MPhil/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 10 17 Birmingham, *Shakespeare studies*, MA
- 10 18 Bristol, *Drama studies*, MA
- 10 19 Bristol, *French drama and theatre history* MA
- 10 20 Bristol, *Twentieth century German drama*, MA
- 10 21 Essex, *Drama*, MA
- 10 22 Glasgow, *Drama*, MPhil
- 10 23 Hull, *Theatre and media production*, MA
- 10 24 Lancaster, *French theatre studies* MA
- 10 25 Lancaster, *Theatre studies*, MA
- 10 26 Leeds, *Theatre studies* MA See page 94
- 10 27 London (RHBC), *Drama and theatre studies* MA
- 10 28 London (Westfield), *Drama*, MA
- 10 29 Loughborough, *Drama and education*, MA
- 10 30 Newcastle, *Hispanic drama and film* MA
- 10 31 Poly of North London, *Modern drama studies*, MA (CNA)
- 10 32 St Andrews, *Shakespeare studies*, MPhil
- 10 33 Sussex, *Renaissance English literature*, MA
- 10 34 Warwick, *English and European renaissance drama*, MA
- 10 35 York, *Medieval studies medieval drama at York*, MA

### **Certificates and diplomas**

- 10:36 Essex IHE, *Drama in education*, Diploma
- 10:37 Glasgow, *Dramatic studies*, Diploma
- 10:38 Hertfordshire CA & D, *Drama therapy*, Diploma
- 10:39 Manchester, *Drama*, Diploma
- 10:40 Wales (Cardiff), *Theatre studies*, Diploma
- 10:41 Welsh CM & D (Cardiff), *Drama*, Advanced Certificate
- 10:42 Welsh CM & D (Cardiff), *Technical theatre*, Certificate

## **THE SHERMAN THEATRE OF UNIVERSITY COLLEGE CARDIFF**

Postgraduate Theatre Studies

**A one-year practical course**

Leading to either a Postgraduate Diploma or a Masters Degree

**Write for details and an application form to:**

**Tutor in Postgraduate Theatre Studies, Sherman Theatre,  
University College, CARDIFF**

**Consult**  
an  
institution's  
official  
prospectus  
before  
applying

## **THE UNIVERSITY OF LEEDS**

**SCHOOL OF ENGLISH**

The Workshop Theatre is committed to teaching the arts of theatre through practical exploration. We offer a one-year MA course with an international enrolment.

*Enquiries to*  
The Workshop Theatre  
The School of English  
The University  
Leeds LS2 9JT



### Certificates and diplomas

- 10:36 Essex IHE, *Drama in education*, Diploma
- 10:37 Glasgow, *Dramatic studies*, Diploma
- 10:38 Hertfordshire CA & D, *Drama therapy*, Diploma
- 10:39 Manchester, *Drama*, Diploma
- 10:40 Wales (Cardiff), *Theatre studies*, Diploma
- 10:41 Welsh CM & D (Cardiff), *Drama*, Advanced Certificate
- 10:42 Welsh CM & D (Cardiff), *Technical theatre*, Certificate

## THE SHERMAN THEATRE OF UNIVERSITY COLLEGE CARDIFF

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**A one-year practical course**

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**Consult**  
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*Enquiries to*  
The Workshop Theatre  
The School of English  
The University  
Leeds LS2 9JT

# 11 Economic and social history

## Higher degrees by research

- 11 1 **Aberdeen**, *Economic history*, MLitt/PhD
- 11 2 **Bath**, *Modern social and economic history* MPhil/PhD
- 11 3 **Belfast**, *Economic and social history*, MA/MSSc/MSc(Econ)/PhD
- 11 4 **Birmingham**, *Economic and social history*, MSocSc/MPhil/PhD
- 11 5 **Birmingham**, *Economic and social history*, MA/MPhil/PhD
- 11 6 **Birmingham**, *Economic and social history*, MA/MPhil/PhD
- 11 7 **Birmingham**, *Economic and social history*, MA/MPhil/PhD
- 11 8 **Birmingham**, *Economic and social history*, MA/MPhil/PhD
- 11 9 **Birmingham**, *Economic and social history*, MA/MPhil/PhD
- 11 10 **Birmingham**, *Economic and social history*, MA/MPhil/PhD
- 11 11 **Exeter**, *Economic history*, MPhil/PhD
- 11 12 **Glasgow**, *Economic history*, MLitt/PhD supervision available in business hist financial and banking hist medical hist social policy urban and transport hist and Imperialism and 3rd World econ development area studies of USA Africa specialised interests in econ and social aspects of Scotland sp facilities in medical and business hist in archives and Wellcome Unit for Hist of Medicine current projects inc entrepreneurship and business biography in Scotland hist of forensic medicine and of highland hospital services urban elites and social structure trade and shipping in Indian Ocean, histories of Clydesdale Bank and TSB US tyre industry good facilities for overseas students who may attend classes appropriate to their area of research Contact Professor A Slaven
- 11 13 **Huddersfield Poly**, *Economic and social history*, MPhil/PhD (CNA)
- 11 14 **Hull**, *Economic and social history* MPhil/PhD
- 11 15 **Kent**, *Economic and social history*, MPhil/PhD
- 11 16 **Leeds**, *Economic history*, MA/MPhil/PhD
- 11 17 **Leeds**, *Economic history*, MA/MPhil/PhD
- 11 18 **Leeds**, *Economic history*, MA/MPhil/PhD
- 11 19 **Leeds**, *Economic history*, MA/MPhil/PhD
- 11 20 **Leeds**, *Economic history*, MA/MPhil/PhD
- 11 21 **Leeds**, *Economic history*, MA/MPhil/PhD
- 11 22 **Manchester**, *History*, MPhil/PhD
- 11 23 **Manchester Poly**, *Economics and economic history* MPhil/PhD (CNA)
- 11 24 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 25 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 26 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 27 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 28 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 29 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 30 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 31 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 32 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 33 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 34 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 35 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)
- 11 36 **N Staffs Poly**, *Social history*, MPhil/PhD (CNA)



**11:37** **Wales (Swansea)**, *Economic history*, MA/MSc(Econ)/PhD

**11:38** **Warwick**, *Social history*, MPhil/PhD

**11:39** **York**, *Economic and social history*, MPhil/DPhil

## **Higher degrees by instruction**

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

**11:40** **Birmingham**, *Economic and social history*, MSocSc

**11:41** **Birmingham**, *Law, society and economy in England 1450-1660*, MA

**11:42** **Essex**, *Social history*, MA/Diploma

**11:43** **Lancaster**, *Modern social history*, MA

**11:44** **Leeds**, *Economic history*, MA

**11:45** **Leeds**, *Social history of art*, MA

**11:46** **London (Birkbeck)**, *Economic and social change in Britain 1870 to present*, MA/MSc

**11:47** **London (Goldsmiths')**, *History of the European labour movement*, MA

**11:48** **London (Inst Commonwealth Studies)**, *Area studies: Commonwealth*, MA

**11:49** **London (LSE)**, *Economic history*, MSc

**11:50** **Middlesex Poly**, *Industrial and social history*, MA (CNAAB)

**11:51** **Sheffield**, *Economic and social history*, MA

**11:52** **Strathclyde**, *Economic and social history*, MLitt/Diploma

**11:53** **Warwick**, *Comparative labour history*, MA

**11:54** **Wolverhampton Poly**, *West Midlands historical studies*, MA

**11:55** **York**, *Economic and social history*, MSc

## **Certificates and diplomas**

**11:56** **Hull**, *Economic history*, Diploma

## 12 Economic and social statistics

### Higher degrees by research

- Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*
- 12 1 Aberdeen, *Sparsely populated areas*, MLitt/PhD  
 12 2 City, *Actuarial science*, MPhil/PhD  
 12 3 City, *Social statistics*, MPhil/PhD  
 12 4 Edinburgh, *Medical statistics*, MPhil/PhD  
 12 5 Exeter, *Economics*, MPhil/PhD  
 12 6 Harriot Watt, *Actuarial mathematics and statistics*, MSc/PhD  
 12 7 Kent, *Quantitative social science*, MPhil/PhD  
 12 8 London (LSE), *Population studies and demography*, MPhil/PhD  
 12 9 London (Queen Mary), *Geography and planning*, MPhil/PhD  
 12 10 London (UCL), *Health services research*, MPhil/PhD  
 12 11 London (UCL), *Health services research*, MPhil/PhD  
 12 12 London (UCL), *Health services research*, MPhil/PhD  
 12 13 Wales (C of Medicine), *Medical computing and statistics*, MSc/PhD  
 12 14 York, *Economics and related studies*, MPhil/DPhil

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 12 15 Essex, *Social science data analysis*, MA/Diploma  
 12 16 Exeter, *Population research*, MA  
 12 17 Kent, *Computing and social statistics*, MA  
 12 18 Kent, *Social statistics*, MA/Diploma  
 12 19 Leeds, *Economic statistics*, MA  
 12 20 London (UCL), *Health services research*, MPhil/PhD

### Registrar (Higher Degrees)

- 12 21 London (UCL), *Health services research*, MPhil/PhD  
 12 22 London (UCL), *Health services research*, MPhil/PhD  
 12 23 London (UCL), *Health services research*, MPhil/PhD  
 12 24 London (UCL), *Health services research*, MPhil/PhD  
 12 25 London (UCL), *Health services research*, MPhil/PhD  
 12 26 London (UCL), *Health services research*, MPhil/PhD  
 12 27 London (UCL), *Health services research*, MPhil/PhD  
 12 28 London (UCL), *Health services research*, MPhil/PhD  
 12 29 London (UCL), *Health services research*, MPhil/PhD  
 12 30 London (UCL), *Health services research*, MPhil/PhD  
 12 31 London (UCL), *Health services research*, MPhil/PhD  
 12 32 Wales (Cardiff), *Population policies and programmes*, MSc(Econ)  
 12 33 Wales (Swansea), *Epidemiology and health planning*, MSc

## Certificates and diplomas

**12:34 City, *Actuarial science*, Diploma**

**12:35 East Anglia, *Economics and statistics*, Diploma, 1 yr f-t (hons deg in any subj accepted);** designed for grads seeking to acquire or strengthen training in economics and stat techniques for entry into further p-g study or into employment as quantitative economists; emphasis on econ principles and stat and quantitative techniques, inc linear programming and econometrics. Contact MF Morrison

**12:36 Heriot-Watt, *Actuarial science*, Diploma**

**12:37 Kent, *Economic and social statistics*, Diploma**

**12:38 Manchester, *Economic and social statistics*, Diploma**

**12:39 Wales (Cardiff), *Population growth studies*, Diploma**

# Which course?

See chapter  
headings on  
pages 42 and  
43 for cognate  
subjects

# UEA

NORWICH  
SCHOOL OF ECONOMIC &  
SOCIAL STUDIES

## Graduate Diploma in Economic Statistics and National Accounts

10-month full-time programme designed for statisticians and mathematicians in Statistical Bureaux and other government planning units. Emphasis on economic analysis, statistical techniques, data collection, the methods of presentation and analysis used in national income accounting.

For further information contact:

Assistant Registrar (A3)  
School of Economic & Social Studies  
University of East Anglia  
Norwich NR4 7TJ  
United Kingdom

## 13 Economics

### Higher degrees by research

- 13 1 Aberdeen, *Political economy*, MLitt/PhD  
 13 2 Bath, *Economics*, MPhil/PhD  
 13 3 Bath, *Political economy*, MPhil/PhD  
 13 4 Belfast, *Economics*, MSc(Econ)/PhD  
 13 5 Birmingham, *Economics*, MSocSc/MPhil/PhD  
 13 6 Birmingham, *Industrial economics and business studies*, MSocSc/MPhil/PhD  
 13 7 Birmingham Poly, *Government and economics*, MPhil/PhD (CNAAB)  
 13 8 Bradford, *Economics*, MPhil/PhD  
 13 9 Bristol, *Economics*, MSc/MPhil/PhD  
 13 10 Bristol Poly, *Economics and social science*, MPhil/PhD  
 13 11 Brunel, *Economics and econometrics*, MPhil/PhD  
 13 12 Buckingham, *Economics*, MPhil/DPhil  
 13 13 Cambridge, *Economics and politics*, MSc/PhD  
 13 14 City, *Economics*, MPhil/PhD  
 13 15 Coventry (Lanchester) Poly, *Economics*, MPhil/PhD (CNAAB)  
 13 16 Dundee, *Economics*, MPhil/PhD  
 13 17 Durham, *Economics*, MA/MPhil/PhD  
 13 18 Exeter, *Economics*, MPhil/PhD

ment mineral economics pricing commodity exports and econ development, industrial development incentives diffusion of innovations industrial market structure international productivity comparisons industrial location urban and regional development economics of trade unions and labour markets time series econometric models, economics of Ricardo and Mill determinants of investment, demand modelling, business cycles determinants of inflation, sources and uses of company finance Contact MF Morrison

- 13 19 Edinburgh, *Economics*, MPhil/PhD  
 13 20 Essex, *Economics*, MPhil/PhD  
 13 21 Exeter, *Economics*, MPhil/PhD  
 13 22 Glasgow, *Economics* MLitt/PhD supervision available for research in Dept of Political Economy and Dept of Social and Econ Research areas most strongly represented inc food and agriculture

- 13 23 Hull, *Economics*, MPhil/PhD  
 13 24 Hull, *Economics*, MPhil/PhD

tal economics esp conservation demand theory functional forms for utility and demand reform of

social security and personal taxation esp econ effects of a social dividend scheme; property taxation and other problems of local and regional taxation; political radicalism; impact of econ and social crisis in inter-war Germany; socio-econ and political development of British labour in 19th and 20th cents; *international trade*: commodity composition of LDC exports; *econ planning*: theory and practice in various countries. Contact H Fleming

**13:25 Huddersfield Poly, *Economic and marketing studies*, MPhil/PhD (CNA A)**

**13:26 Hull, *Economics and commerce*, MPhil/PhD**; supervision available, main research interests: econometrics, labour economics and related areas of industrial relations, education, human capital, economics of family and population economics; also monetary, international, public (inc collective choice) and industrial economics, hist of thought, economics of uncertainty and information. Contact G Makepeace

**13:27 Keele, *Economics*, MA/PhD**

**13:28 Kent, *Economics*, MPhil/PhD**

**13:29 Kingston Poly, *Economics and politics*, MPhil/PhD (CNA A)**

**13:30 Lancashire Poly, *Economics*, MPhil/PhD (CNA A)**

**13:31 Lancaster, *Economics*, MPhil/PhD**

**13:32 Leeds, *Economic studies*, MA/MPhil/PhD**

**13:33 Leeds Poly, *Home economics*, MPhil/PhD (CNA A)**

**13:34 Leicester, *Economics*, MPhil/PhD**

**13:35 Leicester Poly, *Economics and accounting*, MPhil/PhD (CNA A)**

**13:36 Liverpool, *Economics*, MA/PhD**

**13:37 London (Birkbeck), *Economics*, MPhil/PhD**

**13:38 London (LSE), *Economics*, MPhil/PhD**

**13:39 London (Queen Mary), *Economics*, MPhil/PhD**

**13:40 London (SOAS), *Economics*, MPhil/PhD**

**13:41 London (UC), *Political economy*, MPhil/PhD**

**13:42 Loughborough, *Economics*, MPhil/PhD**; supervision available, major areas of research inc: *economics*: economics of EEC; monetary economics and policy; social economics; economics of Middle E; international trade flows; consumer protection and restrictive practices in UK and EEC; international banking, money and finance; economics of financial insts; industrial relations; labour economics; public sector economics; regional and urban economics; transport economics; economics of production and technological change; energy economics; *econ and social hist*: business hist; econ development in 20th cent in Britain; social movements and change in 18th cent; local and regional hist; Victorian family and marriage; hist of British industrial relations and of British labour movement; urban hist; French social hist. Contact Dr K J Button

**13:43 Manchester, *Econometrics*, MA(Econ)/PhD**

**13:44 Manchester, *Economics*, MA(Econ)/PhD**

**13:45 Manchester Poly, *Economics and economic history*, MPhil/PhD (CNA A)**

**13:46 Newcastle, *Economics*, MA/PhD**; supervision in: decision making under uncertainty; economics of law; development, environmental, industrial, labour, regional, transport and welfare economics; commodity markets; international econ policy; exchange rate determination and monetary policy; information economics and capital markets, agency theories of the firm, stock market reaction tests and mod econ hist. Contact Professor MW Jones-Lee

**13:47 Newcastle Poly, *Economics*, MPhil/PhD (CNA A)**

**13:48 NE London Poly, *Business*, MPhil/PhD (CNA A)**

**13:49 N Staffs Poly, *Economics*, MPhil/PhD (CNA A)**

**13:50 Nottingham, *Economics*, MPhil/PhD**

**13:51 Nottingham, *Industrial economics, accountancy and insurance*, MPhil/PhD**

**13:52 Open, *Economics*, BPhil/MPhil/PhD**

**13:53 Oxford, *Economics*, MLitt/DPhil**

**13:54 Paisley CT, *Economics and management*, MPhil/PhD (CNA A)**

**13:55 Poly of Central London, *Economics*, MPhil/PhD (CNA A)**

**13:56 Reading, *Economics*, MPhil/PhD**

**13:57 St Andrews, *Economics*, MPhil/PhD**

**13:58 Salford, *Economics*, MSc/PhD**

**13:59 Sheffield, *Economic studies*, MPhil/PhD**

**13:60 Southampton, *Economics and econometrics*, MPhil/PhD**

- 13 61 South Bank Poly, *Building economics*, MPhil/PhD  
 13 62 South Bank Poly, *Economics*, MPhil/PhD (CNAAB)  
 13 63 South Bank Poly, *Economics*, MPhil/PhD (CNAAB)  
 13 64 South Bank Poly, *Economics*, MPhil/PhD (CNAAB)

Professor RA Hart

- 13 65 Stirling, *Technological economics*, MSc/PhD  
 13 66 Strathclyde, *Economics*, MSc/PhD  
 13 67 Strathclyde, *Scottish economy*, MSc/PhD  
 13 68 Surrey, *Economics*, MPhil/PhD  
 13 69 Surrey, *Energy economics*, MPhil/PhD  
 13 70 Sussex, *Economics*, MPhil/DPhil  
 13 71 Thames Poly, *Economics*, MPhil/PhD (CNAAB)  
 13 72 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)  
 13 73 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)  
 13 74 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)  
 13 75 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)  
 13 76 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)  
 13 77 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)  
 13 78 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)

See page 107

- 13 79 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)  
 13 80 Trent Poly, *Economics and public administration*, MPhil/PhD (CNAAB)

- 13 81 Wales (UWIST), *Management, engineering production and economics*, MSc/PhD  
 13 82 Warwick, *Economics*, MPhil/PhD  
 13 83 Wolverhampton Poly, *Economics and social studies*, MPhil/PhD (CNAAB)  
 13 84 York, *Economics and related studies*, MPhil/DPhil

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report/dissertation or thesis is normally a part of these courses.

- 13 85 Bath, *Fiscal studies*, MSc  
 13 86 Belfast, *Economic and political thought*, MSc  
 13 87 Belfast, *Economics*, MSc(Econ)  
 13 88 Birmingham, *Economics*, MSocSc  
 13 89 Bristol, *Economics*, MSc  
 13 90 Brunel, *Economics for technologists*, MSc/Diploma  
 13 91 Cambridge, *Economics*, MPhil

**13:92** **Cambridge**, *Economics and politics of development*, MPhil

**13:93** **City of London Poly**, *Economics*, MPhil/PhD (CNA)

**13:94** **City of London Poly**, *Econometrics and forecasting*, MSc/Diploma (CNA)

**13:95** **East Anglia**, *Development economics*, MA

**13:96** **East Anglia**, *Economics*, MA, 1 yr f-t; intensive training in adv econ theory, theoretical and applied econometrics, and optional subj; emphasis on relationship betwn theoretical and applied aspects of microeconomics, macroeconomics and econometrics; *options likely to be available*: international trade, industrial economics, urban and regional economics, labour economics, political economy, national income accounting, development economics, development policy and planning; assessment of coursework, exams, research project. **Contact** MF Morrison

**13:97** **Essex**, *Business economics*, MA, 1c yr f-t; 2 yrs p-t; intended for students with econ background who wish to specialise in areas of economics that relate to industry and finance; *course content*: topics in finance and accounting, theory of industrial organisation, corporate strategy and industrial policy, quantitative methods, short dissertation, 1 option from list inc OR, international trade, public economics, comparative industrial relations. **Contact** Dr J Frank

**13:98** **Essex**, *Development economics*, MA

**13:99** **Essex**, *Econometrics*, MA, 1c yr f-t; intended for candidates with strong math and stat background who wish to specialise in econometrics; *course content*: 4 compulsory papers: econ theory, techniques in quantitative economics, econometric theory, applied economics; short dissertation, optional paper from wide range inc macroecon modelling, math economics, maths and stat topics. **Contact** Dr J Frank

**13:100** **Essex**, *Economics*, MA, 1 yr f-t; 2 yrs p-t (depending on quals); intended to complete training in mod econ theory and applied economics, programme designed to meet needs of students with widely varied backgrounds and academic objectives; *course content*: econ theory, quantitative methods and applications, short dissertation, 3 papers from range of options inc open-economy macroeconomics, resource economics, trade and development, applied econometrics, labour economics, game theory and applications. **Contact** Dr J Frank

**13:101** **Essex**, *Political economy*, MA/Diploma

**13:102** **Exeter**, *Economics of finance and investment*, MA

**13:103** **Exeter**, *Economics of the European Community*, MA

**13:104** **Glasgow**, *Economic development*, MPhil

**13:105** **Glasgow**, *Economic planning*, MPhil, 1 or 2 yrs f-t; in Centre for Development Studies; oriented towards those wishing to become econ planners in developing countries, professional planning staff concerned with design and implementation of development plans, and academics, research workers or international agency staff involved in econ planning; see ch 9 for complementary econ development course; *compulsory subjs*: principles of macroecon planning, project appraisal and development planning, quantitative methods for planning; dissertation in related field. **Contact** Dr F Noorbakhsh

**13:106** **Glasgow**, *International finance*, MPhil, 1c yr f-t; in School of Financial Studies/Dept of Political Economy; intended as interdisciplinary training for those wishing to pursue careers in financial management in international agencies and multinational corporations; *compulsory subjs*: corporate finance and international financial markets, international financial management, monetary theory and policy; *optional subjs*: money and finance in developing countries, international economics, project appraisal and development planning, quantitative methods, comparative monetary policy (inc ref to EEC); dissertation on approved topic. **Contact** Dr John Foster

**13:107** **Glasgow**, *Monetary economics*, MPhil, 1c yr or 2 yrs f-t; in Dept of Political Econ; intended for those wishing to become professional macroeconomists inc those seeking careers in domestic or international banking and those who already have experience in these areas; *compulsory subjs*: macroeconomics and monetary theory, financial markets and monetary policy; quantitative methods or topics in adv econometrics; *optional subjs*: money and finance in developing economies, international econ, project appraisal and development planning, corporate finance and international financial markets, comparative monetary policy (inc ref to EEC), topics in adv econ theory, dissertation on approved topic. **Contact** Dr John Foster

**13:108** **Hull**, *Economics, labour economics and econometrics*, MSc(Econ), 1-2 yrs f-t; *programme of study inc*: adv macro and microeconomics, econometrics or quantitative methods, plus 2 options from: applied econometrics (econometrics specialists only), economics of uncertainty, labour economics (2 options, labour economics specialists only), industrial economics, international economics, public economics, economics of family and population economics, etc; exam and dissertation. **Contact** G Makepeace

- 13 109 Keele, *Development economics*, MA/Diploma  
13 110 Kent, *Economics*, MA  
13 111 Kent, *Economics and econometrics*, MA  
13 112 Lancaster, *Industrial economics*, MSc  
13 113 Lancaster, *Trade and development*, MSc  
13 114 . . .  
  
13 115 Leeds, *Economics*, MA 2 yrs p t adv training for practising teachers of economics in secondary and further education, also available to others course content yr 1 econ theory economics  
13 116 . . .  
transport economics (inc computer appreciation), transportation planning economics of transport operation plus project Contact P Mackie  
13 117 Leicester, *Economic development*, MA  
13 118 Leicester, *Economics of public policy*, MA  
13 119 Liverpool, *Economics*, MCom  
13 120 London (Birkbeck), *Economics*, MSc  
13 121 . . .  
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13 129 ..  
13 130 Oxford, *Development economics*, MSc  
13 131 Oxford, *Economics*, MPhil  
13 132 Reading, *International business and economic development*, MA  
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13 135 . . .  
13 136 . . .  
13 137 . . .  
  
13 138 Sheffield, *Economics*, MA  
13 139 . . .  
MSc SocSci Diploma 1 year ft (MSc(SocSci))  
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tudied  
mics  
options 2 from (some limitation in choice) open economy macroeconomics monetary  
economics development economics, public sector economics, industrial economics, labour  
economics, Bayesian econometrics, time series analysis dissertation for MSc(SocSci)(ESRC)  
Contact Professor Alistair Ulph  
13 140 Stirling, *Technological economics*, MSc/Diploma  
13 141 Strathclyde, *Development planning*, MSc/Diploma  
13 142 Surrey, *Energy economics*, MSc  
13 143 Sussex, *Economics*, MA  
13 144 Thames Poly, *Political economy*, MA (CNAU)  
13 145 .  
13 146 .  
13 147 .
- See page 107



# SOCIAL SCIENCES AT GLASGOW

With a tradition of enquiry and innovation in the social sciences which goes back to the days of the Scottish Enlightenment and Adam Smith, the Faculty offers research degree opportunities (MLitt or PhD) in all major social science areas. Taught courses (Diploma or MPhil) are available in a wide variety of subjects:

Applied Population Analysis  
Comparative Politics  
Comparative Regional Analysis  
Development Policy  
Economic Development  
Economic Planning  
Educational Studies  
Housing Studies  
Industrial Relations  
International Finance  
Latin American Studies

Monetary Economics  
Political Theory and Philosophy  
Russian for Social Scientists  
Scottish Government & Administration  
Social Work  
Socialist Theories & Movements  
Sociology  
Soviet & East European Studies  
Town & Regional Planning  
Urban Policy

**Details available from: Clerk to the Faculty of Social Sciences, Adam Smith Building, University of Glasgow, Glasgow G12 8RT.**  
**Telephone 041-339 8855 ext 4725/4693** **Please quote ref SGGS**

## UNIVERSITY OF KEELE

**A CENTRE OF ACADEMIC EXCELLENCE  
SET IN THE HEART OF ENGLAND**

★ Postgraduate taught courses currently available are *1-year Master's degrees* in

American Literature  
Criminology  
Diplomatic Studies  
Education (MEd)  
US History and Institutions

Geographical Methodology and Techniques  
Mathematics Education or Science Education  
Community Care (Mental Handicap)  
Social Science Research in Education  
Victorian Studies (2-year course)

- ★ *Professional qualifications* are offered in teaching (Postgraduate Certificate in Education) and social work (Two-year Diploma in Social Work)
- ★ *Overseas students* wishing to improve their academic background with a view to proceeding to further postgraduate study may take the Graduate Diploma in Development Economics (if relevant), or may be accepted as approved students, where a course of study is arranged to suit their specific requirements
- ★ Departments welcome students wishing to study for their PhD or Master's *degree by thesis*
- ★ Further details and application forms available from the Senior Tutor, University of Keele, Keele, Staffs ST5 5BG Tel (0782) 621111 Telex 36113 UNKLIB G

University of Wales Institute of Science and Technology

DEPARTMENT OF BUSINESS AND ECONOMICS

## MSc ECON INTERNATIONAL ECONOMICS AND BANKING

*One year taught course including*

INTERNATIONAL BANKING  
INTERNATIONAL FINANCE  
INTERNATIONAL TRADE  
DEVELOPMENT ECONOMICS  
and a DISSERTATION

*For further information and an application form contact*

The Assistant Registrar, Academic Registry, UWIST, PO Box 68  
Cardiff CF1 3EU

University College of Wales,  
Aberystwyth

## Postgraduate Studies in Economics

**MSc (Econ) and PhD by research**

Supervision is available in a wide range of fields, including development economics, macro-economic modelling, international economics, labour supply and the simulation of tax and benefit reforms, economic history, industrial relations, and organisational theory.

A nine-month Postgraduate Diploma is also offered for graduates in other disciplines, and others who wish to improve their knowledge of economics.

Students are examined in two compulsory papers: micro- and macro-economics and two options taken in a specialist field such as industrial economics, international economics, government policy, finance and quantitative economics.

Write to Postgraduate Admissions Tutor, Department of Economics, University College of Wales, Aberystwyth SY23 3DB, UK.

University College Cardiff

## Graduate Studies in Economics

The Department of Economics runs a one-year Diploma and one-year MSc(Econ) by coursework. Supervision is available for an MSc(Econ) and PhD by research, principally in the areas of industrial, labour, development, planning economics and the economics of risk and uncertainty.

**Diploma.** One-year full-time. Normally for graduates with degrees in subjects other than economics or those requiring more training in quantitative techniques before proceeding to the MSc(Econ).

**MSc(Econ).** One-year full-time of coursework and dissertation. Open to graduates with a good degree in economics. Four courses are taken, economic analysis, methods of economic investigation, and two options taken from a list of about six courses plus a dissertation.

Further information and application forms are available from The Secretary, Graduate Studies Board in Economics, Department of Economics, University College, PO Box 78, Cardiff, CF1 1TY, UK.

## University of Edinburgh



### One Year MSc/Diploma in Quantitative Economics

#### Aims of the Programme

The programme is designed to provide graduate economists with a professional training in advanced empirical methods as applied to economics. Graduates from these courses will be equipped to specify, empirically implement, and interpret economic models which are founded on rigorous theorising.

#### Content of the Programme

The programme is made up of five compulsory core courses in macroeconomics, microeconomics, statistics, mathematics, and econometrics, four research modules drawn from major areas of economics including money, welfare, monopoly, capitalism, development and cost benefit analysis, and three electives drawn from applied econometrics, structural modelling in industrial organisation, labour economics, public economics, and theoretical and computational issues in economic planning. All candidates sit four written papers. MSc candidates in addition write a dissertation on a topic in quantitative economics. Provision is made for selected candidates to transfer to MPhil and PhD status.

#### Eligibility for Admission

Candidates should hold an honours degree in economics, or a bachelor's degree with a major in economics. The same level of attainment, but with a lesser specialisation in economics is acceptable if the candidate has strength in cognate areas such as finance, operational research, and statistics.

#### For further information write to:

Secretary (Postgraduate Studies), Department of Economics, University of Edinburgh, William Robertson Building, George Square, Edinburgh EH8 9JY, UK.

## EAST ANGLIA UEA

### MA in INDUSTRIAL DEVELOPMENT

12 months full-time (deg req). Covers economics, sociology and management of industrialisation, especially in less-developed countries, including both the general rôle of industry in economic development and international production and trade, and specific strategies for industrialisation. Considers detailed issues of industrial sector planning, and policies to promote industrial growth. Includes training in Monitoring and Evaluation of industrial projects, and methods of input-output analysis. Assessment of coursework, exams and dissertation.

*For further information, contact:*  
School of Development Studies  
University of East Anglia  
Norwich NR4 7TJ  
United Kingdom

## UNIVERSITY OF WARWICK

### GRADUATE STUDIES IN ECONOMICS

**PhD and MPhil:** supervision from a large staff of international repute in most fields of contemporary economic theory, applied economic analysis, and econometric theory. Two ESRC Doctoral Programme Awards available each year.

#### MA in Economics:

one-year full-time, two-year part-time course. Normal entry requirement is a good honours degree in economics. Syllabus includes economic analysis; quantitative methods; and two specialist options from about twelve available each year; plus a dissertation. ESRC Committee Awards and other University scholarships are available for eligible candidates.

#### Graduate Diploma in Economics:

nine-month full-time course, intended for good honours graduates of subjects other than economics or for economists with potential whose previous training is below good honours standard.

#### MA in Quantitative Development Economics:

one-year full-time, two-year part-time course intended for those who have a career in government service or higher education in developing countries. Normal entry is via the Graduate Diploma but direct entry is possible with a good honours degree in either economics or statistics.

#### Graduate Diploma in Quantitative Development Economics:

nine-month full-time course to provide a level of tuition in economics, and development economics and statistics accessible to students who have not obtained the equivalent of a good honours degree.

*For further information and application forms write to:* Graduate Admissions Tutor, Department of Economics, University of Warwick, Coventry CV4 7AL, UK

# 14 Education

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

- 14 1 Aberdeen, Education MLitt/PhD
- 14 2 Bath, Education MPhil/PhD
- 14 3 Belfast, Education MA(Ed)/PhD
- 14 4 Birmingham, Education MEd/PhD
- 14 5 Birmingham Poly, Art education, MPhil/PhD (CNAAB)
- 14 6 Birmingham Poly, Educational studies MPhil/PhD (CNAAB)
- 14 7 Bradford, Education, MPhil/PhD
- 14 8 Brighton Poly, Art and design teacher education, MPhil/PhD (CNAAB)
- 14 9 Brighton Poly, Education studies, MPhil/PhD
- 14 10 Bristol, Education, MEd/MPhil/PhD
- 14 11 Bristol Poly, Art education, MPhil/PhD (CNAAB)
- 14 12 Bristol Poly, Education MPhil/PhD (CNAAB)
- 14 13 Brunel, Education, MPhil/PhD
- 14 14 Bulmershe CHE (Reading), Education, MPhil/PhD (CNAAB)
- 14 15 Cambridge, Education, MSc/MLitt/PhD
- 14 16 Cambridge Inst Ed, Education MEd/MPhil/PhD (East Anglia)
- 14 17 Christ Church C (Canterbury), Education, MPhil/PhD (Kent)
- 14 18 Dundee, Continuing education, MPhil/PhD
- 14 19 Dundee, Medical education, MSc/PhD
- 14 20 Durham, Education MA/MEd/PhD, supervision available sp interests educational and voca

- 14 21 : ' ' . . . . .
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- 14 23 Essex IHE, Educational research, MPhil/PhD (CNAAB)
- 14 24 Exeter, Education, MPhil/PhD
- 14 25 Garnett C, Further education, MPhil/PhD (CNAAB)
- 14 26 Glasgow, Education, MLitt/PhD
- 14 27 Glasgow, Science education, MSc/PhD
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riculum development inc primary school curriculum programmed learning and educational technology computer aided teaching esp with ref to science and stats development of spatial ability in children counselling and guidance in educational settings mastery learning techniques measurement of attitudes towards science Contact Rk Gaydon

- 14 33 Keele, Education MA/PhD

- 14:34 King Alfred's C (Winchester), *Special education*, MPhil (CNA)**
- 14:35 Kingston Poly, *Education*, MPhil/PhD (CNA)**
- 14:36 Lancaster, *Education*, MPhil/MLitt/PhD**
- 14:37 Lancaster, *Management learning*, MPhil/PhD**
- 14:38 Leeds, *Adult and continuing education*, MPhil/PhD**
- 14:39 Leeds, *Education*, MEd/MPhil/PhD**
- 14:40 Leicester, *Education*, MEd/PhD**
- 14:41 Leicester Poly, *Education*, MPhil/PhD (CNA)**
- 14:42 Liverpool, *Education*, MEd/MPhil/PhD; supervision available; research interests: *curriculum studies*: middle schools, assessment in social science subjs, curriculum evaluation, dissemination and implementation, religious education, primary and secondary school science education, science concept development, curriculum continuity, maths education, innovation in further education, decision-making and curriculum; *policy and planning*: at local govt level, formal parent organisations, 19th-cent education; *physical education*: use of oral hist, socialisation into sport; *psychol*: phenomenal awareness in children, high-level thinking skills, children's reading; *sp education*: deviant children, problems of home teachers, head teachers and staff of related services, attitudes to handicap, monitoring development of physically-handicapped children; *teaching and classroom studies*: social interaction and gp dynamics, school climate and educational changes, self-awareness in head teachers, lang use in classroom; *phil and sociol of education*: interdisciplinary research, phil and curriculum; theory and practice in education; moral and religious education. Contact Professor W Harlen**
- 14:43 Liverpool, *Education*, MPhil, 2 yrs f-t: 4 yrs p-t (teaching experience not req); research only; supervision available in most areas of education study. Contact Professor W Harlen**
- 14:44 Liverpool Poly, *Education and community studies*, MPhil/PhD (CNA)**
- 14:45 London (Goldsmiths'), *Education*, MPhil/PhD**
- 14:46 London (Inst Ed), *Education*, MPhil/PhD**
- 14:47 London (KQC), *Education*, MPhil/PhD**
- 14:48 Loughborough, *Design and technology*, MPhil/PhD**
- 14:49 Loughborough, *Education*, MPhil/PhD**
- 14:50 Luton CHE, *Chemical education*, MPhil/PhD (CNA)**
- 14:51 Manchester, *Education*, MPhil/PhD**
- 14:52 Manchester Poly, *Education*, MPhil/PhD (CNA)**
- 14:53 Newcastle, *Education*, MEd/PhD**
- 14:54 NE London Poly, *Architecture and design*, MPhil/PhD (CNA)**
- 14:55 NE London Poly, *Education and humanities*, MPhil/PhD (CNA)**
- 14:56 Nottingham, *Education*, MPhil/PhD**
- 14:57 Open, *Educational studies*, BPhil/MPhil/PhD**
- 14:58 Open, *Educational technology*, BPhil/MPhil/PhD**
- 14:59 Oxford, *Educational studies*, MLitt/DPhil**
- 14:60 Poly of North London, *Teaching studies*, MPhil/PhD (CNA)**
- 14:61 Poly of Wales, *Behavioural and communication studies*, MPhil/PhD (CNA)**
- 14:62 Portsmouth Poly, *Education*, MPhil (CNA)**
- 14:63 Reading, *Education*, MPhil/PhD; supervision available, research interests mainly in fields of comparative education, counselling and guidance, curriculum research and development, environmental education, lang and reading studies, music education, science and maths education. Contact Miss A McCord, Assistant Registrar & Secretary**
- 14:64 St Paul & St Mary's C, *Education*, MPhil/PhD (CNA)**
- 14:65 Sheffield, *Education*, MPhil/PhD**
- 14:66 Sheffield City Poly, *Chemistry*, MPhil/PhD (CNA)**
- 14:67 Sheffield City Poly, *Education*, MPhil/PhD (CNA)**
- 14:68 Sheffield City Poly, *Mathematics, applied statistics and OR*, MPhil/PhD (CNA)**
- 14:69 Sheffield City Poly, *Environmental and recreational studies*, MPhil/PhD (CNA)**
- 14:70 Southampton, *Education*, MPhil/PhD**
- 14:71 Stirling, *Education*, MSc/PhD; supervision available for research; current interests: professional education/development of teachers; assessment; curriculum evaluation; school organisation and management; educational technology; microcomputers in primary education; research methodology; sp education; sociol of education; teaching of hist, maths, computing, science, English and**

- 14 72 *Education, MPhil/PhD (CNA)*  
 14 73 *Education, MPhil/PhD (CNA)*

science and technology evaluating at distance materials to support academic staff training

- inquiry, personal development strategies planning and change in organisations and communities and individuals staff development in professions and public service organisations inter personal skills training district nursing research and development Contact Jacky Leeks/Maureen Pope
- 14 74 *Sussex, Education, MPhil/DPhil*  
 14 75 *Trent Poly, Education, MPhil/PhD (CNA)*  
 14 76 *Ulster, Education, MPhil/DPhil*  
 14 77 *Education, MPhil/PhD (CNA)*  
 14 78 *Education, MPhil/PhD (CNA)*

- 14 79 *Education, MPhil/PhD (CNA)*  
 educational psychol communication media computer studies curriculum development hist of

- 14 80 *Education, MPhil/PhD (CNA)*  
 14 81 *Education, MPhil/PhD (CNA)*  
 14 82 *Warwick, Science education, MA/MSc/PhD*  
 14 83 *West Glamorgan IHE (Swansea), Computer studies, MPhil/PhD (CNA)*  
 14 84 *West Glamorgan IHE (Swansea), Education, MPhil/PhD (CNA)*  
 14 85 *West London IHE, Education, MPhil (CNA)*  
 14 86 *Wolverhampton Poly, Education, MEd/MPhil/PhD (CNA/various univs)*  
 14 87 *Worcester CHE, Education, MPhil/PhD (CNA)*  
 14 88 *York, Education, MPhil/DPhil*

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses*

- 14 89 *Aberdeen, Education, MEd*  
 14 90 *Aston, Teaching of English for specific purposes, MSc/Diploma*  
 14 91 *Bath, Education MEd*  
 14 92 *Belfast, Developmental and educational psychology, MSc*  
 14 93 *Belfast, Education MEd*  
 14 94 *Birmingham, Education, BPhil(Ed)*  
 14 95 *Birmingham, Education, MEd*  
 14 96 *Education, MPhil/PhD (CNA)*  
 14 97 *Education, MPhil/PhD (CNA)*  
 14 98 *Education, MPhil/PhD (CNA)*  
 14 99 *Education, MPhil/PhD (CNA)*  
 14 100 *Brighton Poly, Art and design education, MA/Diploma*

- 14:101 Bristol, *Education*, MEd
- 14:102 Bristol Poly, *Education*, MEd (CNAAB)
- 14:103 Brunel, *Advanced teaching studies*, MEd/Adv Diploma
- 14:104 Bulmershe CHE (Reading), *Classroom studies*, MEd/Diploma (CNAAB)
- 14:105 Bulmershe CHE (Reading), *School administration*, MEd (CNAAB)
- 14:106 Cambridge, *Education*, MPhil
- 14:107 Cambridge Inst Ed, *Applied research in education*, MA (East Anglia)
- 14:108 Cambridge Inst Ed, *Education*, MA (East Anglia)
- 14:109 Chester C, *Curriculum studies*, MEd (Liverpool)
- 14:110 Chester C, *Religious education*, MEd (Liverpool)
- 14:111 Christ Church C (Canterbury), *Art and design education*, MA/Diploma (Kent)
- 14:112 Christ Church C (Canterbury), *Curriculum studies*, MA (Kent)
- 14:113 Christ Church C (Canterbury), *Curriculum studies (special needs)*, MA/Diploma
- 14:114 Christ Church C (Canterbury), *Psychology of education*, MA (Kent)
- 14:115 Christ Church C (Canterbury), *Role of language in education*, MA/Diploma (Kent)
- 14:116 Christ Church C (Canterbury), *Science and mathematics for primary and middle years of schooling*, MA/Diploma (Kent)
- 14:117 Christ Church C (Canterbury), *Teaching of English as a foreign language*, MA/Diploma
- 14:118 City, *Arts management in education*, MA
- 14:119 College of Librarianship (Wales), *Educational technology*, MEd (Wales)
- 14:120 College of Librarianship (Wales), *School librarianship*, MEd (Wales)
- 14:121 Crewe and Alsager CHE, *Curriculum studies*, MEd (CNAAB)
- 14:122 Crewe and Alsager CHE, *Education management*, MSc/Diploma (CNAAB)
- 14:123 Dundee, *Education*, MEd
- 14:124 Durham, *Applied linguistics*, MA
- 14:125 Durham, *Education*, MA, 1 yr f-t; *topics available*: general course, drama in education, guidance and counselling, sp educational needs, study of curriculum; 2 yrs p-t; *topics available*: sp educational needs, comparative education (methods and data, selected countries, determinants of educational policy, international education), drama in education, educational law and admin, phil of education (contemp phil analysis in relation to education, aspects of hist of educational thought, education in a multicultural society, educational policy and practice, other educational studies), further education (hist, types of inst, vocational education, welfare), guidance and counselling, hist of education (esp in 19th- and 20th-cent England and Wales), physical education, psychol of education (nature, scope and methods; aspects of psychol of personality, motivation, learning, ability), sociol of education (school as social inst, education in relationship with wide society), study of curriculum, moral and religious education (inc paper in theology). **Contact** Richard F Goodings
- 14:126 East Anglia, *Applied research in education*, MA
- 14:127 East Anglia, *Chemical education*, MSc
- 14:128 East Anglia, *Education*, MA
- 14:129 East Anglia, *French and the teaching of French*, MA
- 14:130 Edge Hill CHE (Ormskirk), *Reading studies*, MA (Lancaster)
- 14:131 Edinburgh, *Community education*, MSc/Diploma
- 14:132 Edinburgh, *Education*, MEd
- 14:133 Edinburgh, *Educational psychology*, MSc/Diploma
- 14:134 Essex IHE, *Education management*, MSc (CNAAB)
- 14:135 Essex IHE, *Educational research and evaluation*, MEd (CNAAB)
- 14:136 Exeter, *Education*, MEd
- 14:137 Exeter, *Educational psychology*, MEd
- 14:138 Garnett C, *Further education*, MA (CNAAB)
- 14:139 Glasgow, *Education*, MEd/MPhil
- 14:140 Glasgow, *Educational psychology and child guidance*, MAppSci
- 14:141 Glasgow, *Science and science education*, MSc
- 14:142 Hatfield Poly, *Education*, MEd (CNAAB)
- 14:143 Hertfordshire CHE (Watford), *Education*, MEd (CNAAB)
- 14:144 Huddersfield Poly, *Investigation of change in further education*, MEd (CNAAB)





*tion; sp education*: social psychol, maladjustment, learning disabilities, current trends, sp needs; *sociol*; *teaching and classroom studies*: teacher's role, school climate and educational change, social interaction and gp dynamics in classroom, lang and learning; *theory into practice*; moral and religious education. Contact Professor W Harlen

- 14:175 Liverpool IHE, *Religious education*, MEd (Liverpool)  
 14:176 Liverpool IHE, *Science education*, MEd (Liverpool)  
 14:177 London (Birkbeck), *Second language learning and teaching*, MA  
 14:178 London (Goldsmiths'), *Curriculum studies*, MA  
 14:179 London (Goldsmiths'), *Language and literature in education*, MA  
 14:180 London (Goldsmiths'), *Sociology of education*, MA  
 14:181 London (Inst Ed), *Art and design in education*, MA  
 14:182 London (Inst Ed), *Child development*, MA/MSc  
 14:183 London (Inst Ed), *Comparative education*, MA  
 14:184 London (Inst Ed), *Comparative education and education in developing countries*, MEd  
 14:185 London (Inst Ed), *Comparative education and foreign language teaching*, MEd  
 14:186 London (Inst Ed), *Comparative education and geographical education*, MEd  
 14:187 London (Inst Ed), *Curriculum studies*, MA  
 14:188 London (Inst Ed), *Curriculum studies and comparative education*, MEd  
 14:189 London (Inst Ed), *Curriculum studies and education in developing countries*, MEd  
 14:190 London (Inst Ed), *Economics education*, MA  
 14:191 London (Inst Ed), *Economics of education*, MA  
 14:192 London (Inst Ed), *Education*, MA/MSc/Diploma (London)  
 14:193 London (Inst Ed), *Education in developing countries*, MA  
 14:194 London (Inst Ed), *Education in multicultural urban areas*, MA  
 14:195 London (Inst Ed), *Educational administration*, MA  
 14:196 London (Inst Ed), *Educational psychology*, MA/MSc;  
 14:197 London (Inst Ed), *Educational statistics*, MA/MSc  
 14:198 London (Inst Ed), *Educational statistics and educational administration*, MA  
 14:199 London (Inst Ed), *Film and television studies for education*, MA  
 14:200 London (Inst Ed), *Geography in education*, MA  
 14:201 London (Inst Ed), *Higher and further education*, MA  
 14:202 London (Inst Ed), *History of education*, MA  
 14:203 London (Inst Ed), *History in education*, MA  
 14:204 London (Inst Ed), *Language and literature in education*, MA  
 14:205 London (Inst Ed), *Mathematical, statistical and computing education*, MSc  
 14:206 London (Inst Ed), *Music education*, MA  
 14:207 London (Inst Ed), *Philosophy of education*, MA  
 14:208 London (Inst Ed), *Political education*, MA  
 14:209 London (Inst Ed), *Psychology and education of children with special needs*, MA/MSc  
 14:210 London (Inst Ed), *Psychology of education*, MA/MSc  
 14:211 London (Inst Ed), *Religious education*, MA  
 14:212 London (Inst Ed), *Rights in education*, MA  
 14:213 London (Inst Ed), *Science education*, MA  
 14:214 London (Inst Ed), *Sociology of education*, MA  
 14:215 London (Inst Ed), *Sociology of education and education in developing countries*, MEd  
 14:216 London (Inst Ed), *Teaching of English to speakers of other languages*, MA  
 14:217 London (KQC), *Computers in education*, MA/MEd  
 14:218 London (KQC), *Mathematics education*, MA/MEd  
 14:219 London (KQC), *Religious education*, MA  
 14:220 London (KQC), *Science education*, MA/MEd  
 14:221 London (KQC), *Science or mathematics education*, MA  
 14:222 London (KQC), *Urban education*, MA/MPhil  
 14:223 London (UC), *Educational psychology*, MSc  
 14:224 Loughborough, *Archive, library and information studies and education*, MA  
 14:225 Loughborough, *Computer education*, MSc

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 14 242 Manchester Poly *Science education* MSc/Diploma (CNAAB)  
 14 243 Middlesex Poly *Reading behaviour* MEd (CNAAB)  
 14 244 Newcastle *Education* MEd  
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 14 254 Nottingham *English* MA  
 14 255 Open *Advanced educational and social research methods* MSc  
 14 256 Oxford *Educational studies* MSc  
 14 257 Reading *Art and design education* MA  
 14 258 Reading *Chemical education* MSc  
 14 259 Reading *Classics* MA  
 14 260 Reading *Education and society* MA  
 14 261 Reading *Mathematical education* MA  
 14 262 Reading *Music education* MA  
 14 263 Reading *Organisation, planning and management in education* MA 1 yr full-time intro to management problems, financial issues, changing educational patterns and contemporary educational issues from comparative perspective, coursework assessment, exam and dissertation. Contact Miss A McCord, Assistant Registrar & Secretary.  
 14 264 Reading *Physics education* MSc  
 14 265 Reading *Science education* MSc  
 14 266 Reading *Teaching English as a foreign language* MA/Diploma  
 14 267 Roehampton IHE *Educational studies* MA  
 14 268 Roehampton IHE *Music education* MA/Diploma  
 14 269 Royal CA *Design education studies* MA  
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 14 277 Sheffield *Educational psychology* MA

- 14:278** Sheffield City Poly, *Education*, MEd/Diploma (CNA)  
**14:279** Sheffield City Poly, *Education management*, MSc (CNA)  
**14:280** Sheffield City Poly, *Science education*, MSc/Diploma  
**14:281** Southampton, *Education*, MA(Ed)  
**14:282** Southampton, *Education*, MSc(Ed)  
**14:283** Southampton, *Educational psychology*, MSc(SocSc)  
**14:284** Southampton, *Mathematics education*, MSc See page 123  
**14:285** South Bank Poly, *Mathematical education*, MSc (CNA)  
**14:286** South Bank Poly, *Sociology*, MSc (CNA)  
**14:287** Stirling, *Education*, MEd/Diploma, 1 yr f-t: 2 yrs p-t (deg and teaching qual req); designed for those interested in various aspects of further professional development in teaching, research, advisory services and admin; *curriculum*: gen programme; specialist programme in educational research methodology; certain courses in above areas oriented towards needs of overseas students; assessment of coursework, plus dissertation yr for MEd. Contact Professor JH Duthie  
**14:288** Stirling, *Special educational needs*, MEd/Diploma  
**14:289** Strathclyde, *Educational psychology*, MSc  
**14:290** Strathclyde, *Linguistics for the teaching of English language and literature*, MLitt/Diploma/Certificate  
**14:291** Sunderland Poly, *Education*, MEd (CNA)  
**14:292** Sunderland Poly, *Mathematical modelling and computer simulation*, MSc (CNA)  
**14:293** Surrey, *Chemical and biochemical sciences and education*, MSc/Diploma  
**14:294** Surrey, *Educational studies*, MSc/Diploma, 2 yrs p-t (deg or equiv and 3 yrs' experience in teaching or admin usually req); intended for teachers and administrators in education, industry and professions; *course content*: 2 of: organisation and admin in education (inc study of managerial issues within insts, c and local govt policy and decision making); adult education (inc exam of learning and teaching in adult education, purposes and organisation of adult education); curriculum studies (inc curriculum change as institutional process and dynamics of curriculum reform); developments in education of young adults (inc study of contemp issues and new developments in education of 16-19 age gp); assessment by essay, project work and written exams, plus dissertation for MSc. Contact Judith Potter/Bob Brownhill  
**14:295** Surrey, *Practice of higher education*, MSc/Diploma  
**14:296** Surrey, *Practice of science education*, MSc/Diploma  
**14:297** Sussex, *Curriculum development in higher and further education*, MA  
**14:298** Sussex, *Curriculum development in schools*, MA  
**14:299** Sussex, *Curriculum evaluation, planning and management*, MA  
**14:300** Sussex, *Curriculum management and development*, MA  
**14:301** Sussex, *Education and society*, MA  
**14:302** Sussex, *Educational policies and decision making*, MA  
**14:303** Sussex, *Independent studies*, MA  
**14:304** Sussex, *Language, the arts and education*, MA  
**14:305** Sussex, *Women and education*, MA  
**4:306** Trinity C (Carmarthen), *Curriculum studies (primary education)*, MEd  
**4:307** Ulster, *Computer science education*, MSc/Diploma  
**14:308** Ulster, *Continuing education*, MA/Diploma  
**14:309** Ulster, *Education*, BPhil  
**14:310** Ulster, *Education*, MA  
**14:311** Ulster, *Education management*, MSc  
**14:312** Wales (Aberystwyth), *Bilingual and language education*, MEd  
**14:313** Wales (Aberystwyth), *Educational technology*, MEd/Diploma  
**14:314** Wales (Bangor), *Education*, MEd  
**14:315** Wales (Bangor), *Education in the field of dyslexia*, MEd  
**14:316** Wales (Cardiff), *Education*, MEd, 1 yr f-t: available p-t; *course content*: 2 options from: art education, computer studies, creative arts (primary), curriculum development, economics of education, educational admin, educational psychol, educational technology, environmental education, hist of education, law of education, phil of education, sociol of education, education of children with behavioural problems, education and development in developing countries, TEFL (offered at Wales (UWIST)), behavioural problems in schools, learning difficulties in schools,

- 14 317 *Warwick, Education, MEd*  
 14 318 *Warwick, English language teaching, MA*  
 14 319 *Warwick, Primary education, MA/Diploma*  
 14 320 *Warwick, Science education, MSc*  
 14 321 *Warwick, Education, MEd*  
 14 322 *Warwick, English language teaching, MA*  
 14 323 *Warwick, Primary education, MA/Diploma*  
 14 324 *Warwick, Science education, MSc*  
 14 325 *Warwick, Education, MEd*  
 14 326 *Warwick, English language teaching, MA*  
 14 327 *Warwick, Primary education, MA/Diploma*  
 14 328 *Warwick, Science education, MSc*  
 14 329 *Warwick, Education, MEd*  
 14 330 *Warwick, English language teaching, MA*  
 14 331 *York, Applied educational studies, MA*  
 14 332 *York, Biology and biological education, MSc*  
 14 333 *York, Chemistry and chemical education, MSc*  
 14 334 *York, Educational studies, MA*  
 14 335 *York, Mathematics and mathematical education, MSc*  
 14 336 *York, Physics and physics education, MSc*

### Certificates and diplomas

- 14 337 *Aberdeen, Education, Diploma*  
 14 338 *Belfast, Advanced study of education, Diploma*  
 14 339 *Birmingham Poly, Professional studies in education (art and design) Diploma*  
 14 340 *Bishop Grosseteste C (Lincoln), Primary education, Diploma (Nottingham)*  
 14 341 *Bishop Grosseteste C (Lincoln), Special educational needs, Diploma (Nottingham)*  
 14 342 *Bolton IHE, Advanced study in technical education, Diploma (Manchester)*  
 14 343 *Bradford and Ilkley CC, Education and training of young people, Diploma (CNA)*  
 14 344 *Bradford and Ilkley CC, The middle school years, Diploma (CNA)*  
 14 345 *Bradford and Ilkley CC, Social education in the community, Diploma (CNA)*  
 14 346 *Bradford and Ilkley CC, Special education, Diploma (CNA)*  
 14 347 *Bretton Hall CHE, Applied education studies, Diploma (Leeds)*  
 14 348 *Bretton Hall CHE, Art education Advanced Diploma*  
 14 349 *Bretton Hall CHE, English studies, Advanced Diploma*  
 14 350 *Bridgwater C, Extension studies, Diploma (Bristol Poly)*  
 14 351 *Brighton Poly, Music performance, Diploma*  
 14 352 *Bristol, Advanced studies in education, Diploma*  
 14 353 *Bristol, Education, Diploma*  
 14 354 *Bristol, Education, Diploma*  
 14 355 *Bristol, Education, Diploma*  
 14 356 *Bristol, Education, Diploma*  
 14 357 *Bristol, Education, Diploma*  
 14 358 *Bristol, Education, Diploma*  
 14 359 *Bristol, Education, Diploma*  
 14 360 *Bristol, Education, Diploma*  
 14 361 *Bristol, Education, Diploma*  
 14 362 *Christ Church C (Canterbury), Religious education, Diploma*  
 14 363 *Christ Church C (Canterbury), Science education, Diploma (ASE)*

- 14:364 Christ Church C (Canterbury), *Teaching of modern languages (French)*, Diploma (Kent)
- 14:365 City, *Music information technology*, Diploma
- 14:366 Cornwall CF & HE, *Science education for teachers in primary schools*, Diploma (ASE)
- 14:367 Crowe and Alsager CHE, *Business studies*, Certificate
- 14:368 Crowe and Alsager CHE, *Education management*, Diploma (CNA A)
- 14:369 Crowe and Alsager CHE, *Educational computing*, Certificate/Diploma
- 14:370 Crowe and Alsager CHE, *Mathematical education*, Diploma
- 14:371 Crowe and Alsager CHE, *Science education*, Diploma
- 14:372 Crowe and Alsager CHE, *Secondary school mathematics*, Advanced Certificate
- 14:373 Crowe and Alsager CHE, *Special education*, Diploma (CNA A)
- 14:374 Derbyshire CHE (Derby), *Education*, Diploma
- 14:375 Derbyshire CHE (Derby), *Professional studies in education*, Certificate
- 14:376 Dundee, *Education*, Diploma
- 14:377 Dundee, *Educational administration*, Diploma
- 14:378 Dundee CT, *Educational technology*, Diploma (CNA A)
- 14:379 Durham, *Education*, Diploma
- 14:380 East Anglia, *Chemistry and chemical education*, Diploma
- 14:381 Edge Hill CHE (Ormskirk), *Education*, Diploma of Adv Studies (Lancaster)
- 14:382 Edinburgh, *Christian education*, Diploma
- 14:383 Essex IHE, *Art education*, Diploma (CNA A)
- 14:384 Essex IHE, *Computer education*, Diploma (CNA A)
- 14:385 Essex IHE, *Drama in education*, Diploma
- 14:386 Essex IHE, *Educational technology*, Diploma (CNA A)
- 14:387 Essex IHE, *Language and reading*, Diploma (CNA A)
- 14:388 Essex IHE, *Management of mathematics*, Diploma (Math Assoc)
- 14:389 Essex IHE, *Management studies (education)*, DMS (CNA A)
- 14:390 Essex IHE, *Mathematical education*, Diploma (Math Assoc)
- 14:391 Essex IHE, *Personal and social education*, Diploma (CNA A)
- 14:392 Essex IHE, *Teaching of mathematics to low-attaining pupils*, Diploma (Math Assoc)
- 14:393 Essex IHE, *Technology*, Diploma (CNA A)
- 14:394 Exeter, *Education (music and the arts in education)*, Diploma
- 14:395 Garnett C, *Educational management*, Diploma
- 14:396 Garnett C, *Educational technology*, Diploma (CNA A)
- 14:397 Glasgow, *Adult education*, Diploma
- 14:398 Glasgow, *Education*, Diploma
- 14:399 Glasgow, *Educational psychology*, Diploma
- 14:400 Gloucestershire CAT (Gloucester), *Education management*, Diploma (Bristol Poly)
- 14:401 Gwent CHE (Newport), *Counselling and pastoral care*, Diploma
- 14:402 Hatfield Poly, *Applied educational studies*, Diploma
- 14:403 Hatfield Poly, *Education*, Certificate (CNA A)
- 14:404 Hatfield Poly, *Teaching and learning in higher education*, Diploma
- 14:405 Hertfordshire CHE (Watford), *Early childhood education*, Diploma
- 14:406 Hertfordshire CHE (Watford), *Education of children with learning difficulties*, Diploma
- 14:407 Hertfordshire CHE (Watford), *Education of hearing impaired children*, Diploma
- 14:408 Hertfordshire CHE (Watford), *Mathematical education*, Diploma (Math Assoc)
- 14:409 Hertfordshire CHE (Watford), *Special education*, Diploma
- 14:410 Hertfordshire CHE (Watford), *Teaching of art*, Diploma
- 14:411 Hertfordshire CHE (Watford), *Teaching of mathematics to low attainers*, Diploma (Math Assoc)
- 14:412 Hertfordshire CHE (Watford), *Teaching of reading*, Diploma
- 14:413 Huddersfield Poly, *Language and literacy*, Certificate
- 14:414 Huddersfield Poly, *Teaching of children with learning difficulties*, Certificate
- 14:415 Hull, *Adult education*, BA(Ed)
- 14:416 King Alfred's C (Winchester), *Art in education*, Diploma (CNA A)
- 14:417 King Alfred's C (Winchester), *Computing for teachers*, Certificates
- 14:418 King Alfred's C (Winchester), *Language in education*, Diploma (CNA A)

- 14 419 King Alfred's C (Winchester), *Religious studies*, Certificate  
 14 420 F . . . . .  
 14 421 I . . . . .  
 14 422 I . . . . .  
 14 423 La Sainte Union CHE (Southampton), *Language development and the teaching of reading*, Diploma (Southampton)  
 14 424 La Sainte Union CHE (Southampton), *Mathematical education*, Diploma (Math Assoc)  
 14 425 Leeds, *Assessment of educational performance*, Diploma  
 14 426 Leeds, *Computers in education*, Diploma  
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 14 429 . . . . .  
 14 430 Leeds, *Educational administration*, Diploma  
 14 431 Leeds, *Educational studies*, Diploma  
 14 432 Leeds, *Primary education*, Diploma  
 14 433 Leeds, *Secondary education*, Diploma  
 14 434 Leeds, *Teaching English overseas*, Diploma  
 14 435 Leeds, *Teaching of mathematics*, Diploma  
 14 436 Leeds Poly, *Education of children with special needs*, Diploma (CNAAB)  
 14 437 Leicester Poly, *Computing*, Diploma  
 14 438 Liverpool IHE, *Education* Diploma  
 14 439 Liverpool IHE, *Environmental education*, Diploma  
 14 440 Liverpool IHE, *French*, Diploma  
 14 441 Liverpool IHE, *Mathematical education*, Diploma  
 14 442 Liverpool IHE, *Religious education*, Diploma  
 14 443 Liverpool IHE, *Science education*, Diploma  
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 14 445 L . . . . .  
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 14 452 I . . . . .  
 14 453 I . . . . .  
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 14 455 I . . . . .  
 14 456 London (Inst Ed), *Art and design education*, Diploma  
 14 457 London (Inst Ed), *Child development and pre school/primary education*, Diploma  
 14 458 . . . . .  
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 14 460 . . . . .  
 14 461 London (Inst Ed), *Educational planning* Diploma  
 14 462 London (Inst Ed), *Educational rehabilitation of young people*, Diploma  
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- 14:473 Manchester, *Community development*, Diploma  
14:474 Manchester, *Education*, Diploma  
14:475 Manchester, *Education for primary health care*, Diploma  
14:476 Manchester, *Industrial education and training*, Diploma  
14:477 Manchester, *Special educational needs*, Diploma  
14:478 Manchester, *Teaching of English to speakers of other languages*, Diploma/Certificate  
14:479 Manchester, *Technical education*, Diploma  
14:480 Manchester Poly, *Management in education*, Diploma  
14:481 Manchester Poly, *Special educational needs*, Diploma  
14:482 Mid-Kent CH & FE, *Computer education*, Certificate/Advanced Certificate  
14:483 Mid-Kent CH & FE, *Management studies (public administration)*, DMS (CNAAB)  
14:484 New C (Durham), *Computing in the curriculum*, Diploma (Durham)  
14:485 New C (Durham), *Craft design and technology*, Diploma (Durham)  
14:486 New C (Durham), *Mathematical education*, Diploma (Math Assoc)  
14:487 New C (Durham), *Pre-vocational education and vocational preparation*, Diploma (Durham)  
14:488 New C (Durham), *Teaching mathematics to low attainers in secondary schools*, Diploma (Math Assoc)  
14:489 New C (Durham), *Teaching of children with learning difficulties*, Diploma (CNAAB)  
14:490 New C (Durham), *Teaching of history*, Diploma (Hist Assoc)  
14:491 New C (Durham), *Teaching primary science*, Diploma (Durham)  
14:492 Newcastle, *Advanced educational studies*, Diploma  
14:493 Newcastle, *Educational studies*, Diploma  
14:494 Newcastle Poly, *Professional studies in education*, Diploma (CNAAB)  
14:495 N Cheshire C, *Computer education*, Diploma  
14:496 N Cheshire C, *English studies*, Diploma (Manchester)  
14:497 N Cheshire C, *Mathematical education*, Diploma (Math Assoc)  
14:498 NE London Poly, *Counselling and pastoral care with special reference to schools*, Diploma (CNAAB)  
14:499 NE London Poly, *Management studies (education)*, DMS (CNAAB)  
14:500 NE Wales IHE, *Education of children with special learning difficulties*, Diploma  
14:501 NE Wales IHE, *Education of the 14 to 19 age group*, Diploma (Wales)  
14:502 NE Wales IHE, *Management of schools*, Diploma  
14:503 NE Wales IHE, *Primary mathematics education*, Diploma  
14:504 NE Wales IHE, *Science in the primary school*, Diploma  
14:505 Norwich City CF & HE, *Further education*, Diploma (Leeds)  
14:506 Norwich City CF & HE, *Management studies (education)*, DMS (CNAAB)  
14:507 Oxford, *Educational studies*, Diploma  
14:508 Oxford Poly, *Education of children with special needs*, Diploma  
14:509 Oxford Poly, *Educational management*, Diploma  
14:510 Oxford Poly, *Special educational needs*, Diploma  
14:511 Oxford Poly, *Teaching of hearing-impaired children*, Certificate  
14:512 Poly of North London, *Mathematics in the primary school*, Diploma (Math Assoc)  
14:513 Poly of Wales, *Education management*, Diploma (CNAAB)  
14:514 Portsmouth Poly, *Environmental education*, Diploma  
14:515 Reading, *Agricultural education*, Diploma  
14:516 Reading, *Remedial language studies*, Diploma  
14:517 Roehampton IHE, *Practice of science education*, Diploma  
14:518 St Mark & St John C (Plymouth), *English language teaching*, Diploma (Exeter)  
14:519 St Mark & St John C (Plymouth), *Personal and social education in secondary schools*, Diploma (CNAAB)  
14:520 St Mark & St John C (Plymouth), *Science education for teachers in primary schools*, Diploma  
14:521 St Mark & St John C (Plymouth), *Teaching of mathematics to low-attaining pupils*, Diploma (Math Assoc)  
14:522 St Mary's C (Strawberry Hill), *Mathematical education*, Diploma (Math Assoc)  
14:523 St Mary's C (Strawberry Hill), *Primary science*, Diploma (Surrey)  
14:524 St Mary's C (Strawberry Hill), *Principles and practice of industry and commerce*, Diploma (Surrey)

- 14 525 St Mary's C (Strawberry Hill), *Religious education*, Diploma (Surrey)  
 14 526 St Mary's C (Strawberry Hill), *Teaching of English as a second language*, Diploma (Surrey)  
 14 527 Sheffield City Poly, *Design technology*, Diploma  
 14 528 Sheffield City Poly, *Education management*, Diploma  
 14 529 St Mary's C (Strawberry Hill), *Religious education*, Diploma  
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 14 534 Southampton IHE, *Educational management* Diploma  
 14 535 Stirling, *Computer education*, Diploma  
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 14 542 Thames Poly, *Management of mathematics departments*, Diploma  
 14 543 Thames Poly, *Physics*, Diploma (CNAAB)  
 14 544 Thames Poly, *Professional studies in education* Diploma  
 14 545 Trent Poly, *Craft, design and technology*, Diploma  
 14 546 Trinity C (Carmarthen), *Curriculum development and management in the primary school*, Diploma  
 14 547 Ulster, *Advanced studies in education*, Diploma  
 14 548 Ulster, *Continuing education*, Diploma  
 14 549 Ulster, *Mathematical studies*, Diploma/Certificate  
 14 550 Ulster, *Teaching of English as a foreign language*, Diploma  
 14 551 Wales (Aberystwyth), *Advanced study in education*, Diploma  
 14 552 Wales (UWIST), *Teaching of English as a foreign language*, Diploma  
 14 553 Warwick, *English language teaching and administration* Diploma  
 14 554 Warwick, *Industry and education*, Diploma  
 14 555 Warwick, *Language improvement and methodology*, Certificate  
 14 556 Warwick, *Science education* Diploma  
 14 557  
 14 558  
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 14 560  
 (CNAAB)  
 14 561 West London IHE, *Mathematical education* Diploma (Math Assoc)  
 14 562 West London IHE, *Professional studies in education* Diploma  
 14 563 West Midlands CHE (Walsall), *Environmental studies in the middle years of schooling* Diploma  
 (CNAAB)  
 14 564  
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 14 569 Worcester CHE, *Children with special educational needs* Diploma  
 14 570 Worcester CHE, *Curriculum development in school and classroom* Diploma  
 14 571 York, *Applied educational studies* Diploma  
 14 572 York, *Global and multicultural education*, Diploma





# UNIVERSITY OF MANCHESTER

## Department of Education

### Research degrees

Facilities are available for the pursuit of full-time and part-time supervised research leading to the degrees of MPhil and PhD.

**Taught courses** are available in the following areas

#### **MEd**

Adult Education and Community Development  
Aesthetic Education  
Assessment and Evaluation  
Curriculum Development  
Educational Administration and Management  
Education in Developing Countries  
Education and the Mass Media  
Educational Psychology  
Educational Studies (modular studies)  
Higher/Teacher Education  
History of English Education  
Industrial Education and Training  
Management and Administration of Higher Education  
Microcomputers in Education  
Multicultural Education  
Organisation and Planning of Education  
Philosophy of Education  
Primary Health Care  
Physical Education  
Reading  
Science, Maths and Technology Education  
Sociology of Education  
Special Education  
Teaching of English Overseas  
Teaching of English to Speakers of Other Languages  
Urban Education  
Youth Studies

#### **MSc**

Educational Psychology (Professional Training)

#### **Diploma**

Adult Education  
Advanced Study in Education  
Community Development  
Primary Health Care  
Guidance and Counselling in Education  
Industrial Education and Training  
Special Educational Needs (Regional Diploma)  
Education of Handicapped Children  
Teaching of English Overseas  
Teaching of English to Speakers of Other Languages  
Primary School Management  
Secondary School Management

#### **Certificate**

Adult Education and Community Development  
Principles and Practice of Primary Education  
Postgraduate Certificate in Education

*For further information please write to*

**Professor J D Turner, Department of Education, University of Manchester M13 9PL.**

# UNIVERSITY OF NOTTINGHAM

## SCHOOL OF EDUCATION

FULL TIME AND PART TIME  
ADVANCED STUDIES IN EDUCATION



### MASTER OF PHILOSOPHY DOCTOR OF PHILOSOPHY

These research degrees by thesis are open to suitably qualified graduates (or equivalent). A research methods training course is given. Areas of research interest include those noted under BPhil and MEd courses and detailed research topics may be negotiated prior to final application.

### BACHELOR OF PHILOSOPHY

The degree by coursework assignments and dissertation is open to suitably qualified graduates and non-graduates. There are opportunities to specialise in:

- Microcomputers as an Aid to Teaching and Learning
- Special Needs in Education
- Mass media Education
- Human Relations: Counselling and Pastoral Care
- Pre-school and Primary Education
- Management in Education

### MASTER OF EDUCATION

The degree by coursework assignments and dissertation is open to suitably qualified graduates and those with equivalent qualifications. There are opportunities to specialise in:

- Continuing Education
- Curriculum Studies
- Educational Management
- Human Relations
- Learning and Learning Difficulties
- Mathematical Education
- Multicultural Education

Other options include: ● Assessment and Evaluation  
● Comparative Education ● History of Education  
● Language and Reading ● Law and Administration  
● Literature, the Arts and Education ● Philosophy of Education ● Science Education ● Sociology of Educational Institutions ● Special Educational Needs

Details from  
Miss P. Brown  
School of Education  
University of Nottingham  
University Park, Nottingham NG7 2RD

# UNIVERSITY OF SOUTHAMPTON

## FACULTY OF EDUCATIONAL STUDIES

The Faculty offers the following courses

### MA(Ed) degree

One year's full time study or two years' part time in the following fields of study

Adult and Post-compulsory Education  
Curriculum Analysis and Design  
Educational Assessment and Evaluation  
Health Education  
Information Technology and Education

Language and Linguistics in Education  
Language, Literature and Media Studies  
Management in Education  
Physical Education and Curriculum Change  
Science and Technology Education

### MSc(Ed) degree

One year's full time study

Biological Education  
Physics Education

Chemical Education  
Geographical Education

Diploma in Advanced Educational Studies: Adult, Youth and Community Education  
Two years' part time study

### MSc in Mathematics Education

One year's full time study jointly in the Faculty of Mathematical Studies and the Faculty of Educational Studies

Further information: The Assistant Registrar, Faculty of Educational Studies  
The University, Southampton SO9 5NH

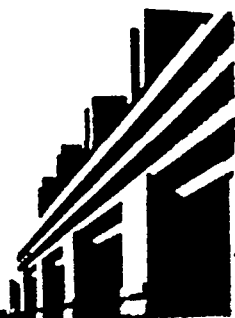
# INSTITUTE OF EDUCATION UNIVERSITY OF LONDON

The Institute offers a full range of courses: initial teacher training for graduates; advanced diplomas and BEd degree courses; Master's degrees (MA, MSc, MEd); Research degrees (MPhil, PhD); Associateship, Special and Short Courses. Applications from students from ethnic minorities are welcomed.

Further information:  
**The Academic Registrar,  
Institute of Education,  
University of London,  
20 Bedford Way,  
London WC1H 0AL.**

## Teaching and research cover the following areas:

- Foundation disciplines — Philosophy, Psychology, Sociology, History, Economics of education
- Curriculum studies — subjects of the school curriculum.
- Comparative education
- Education of children with special needs
- Education in developing countries
- English for speakers of other languages
- Educational policy and administration
- Child development
- Statistical methods
- Health and welfare education
- Educational media
- Computer applications in education



## THE UNIVERSITY OF HULL

Department of Adult &  
Continuing Education

### POSTGRADUATE COURSES

Adult, Continuing &  
Post-secondary Education

*Diploma in Adult & Continuing Education*  
*Bachelor of Arts (Education)*  
*Master of Arts*  
*Master of Education*  
*Master of Philosophy*  
*Doctor of Philosophy*

For further information please contact:  
Judi Irving, BA(Berkeley), BA(Hull)  
Department of Adult &  
Continuing Education  
49 Salmon Grove, Hull HU6 7SZ  
United Kingdom  
Telephone: (0482) 465435

## Postgraduate awards?

Read the  
editorial on  
pages 17–22

## Abbreviations

See pages 31–33

## 15 Education (physical)

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section

- 15 1 Birmingham, *Physical education*, MA/MLit/PhD
- 15 2 Brighton Poly, *Human movement studies*, MPhil/PhD (CNAAB)
- 15 3 Leeds, *Physical education*, MPhil/PhD
- 15 4 London (Goldsmiths'), *Physical education*, MPhil/PhD (CNAAB)
- 15 5 London (Goldsmiths'), *Physical education*, MPhil/PhD (CNAAB)
- 15 6 London (Goldsmiths'), *Physical education*, MPhil/PhD (CNAAB)
- 15 7 London (Goldsmiths'), *Physical education*, MPhil/PhD (CNAAB)
- 15 8 Poly of North London, *Physical education*, MPhil/PhD (CNAAB)
- 15 9 Sheffield City Poly, *Environmental and recreational studies*, MPhil/PhD (CNAAB)
- 15 10 Surrey, *Dance*, MPhil/PhD
- 15 11 West London IHE, *Physical education and sciences*, MPhil (CNAAB)

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses

- 15 12 Birmingham, *Physical education*, MA
- 15 13 Brighton Poly, *Physical education*, MA/Diploma (CNAAB)
- 15 14 Leeds, *Physical education*, MA
- 15 15 Leeds, *Physical education*, MEd
- 15 16 London (Goldsmiths'), *Physical education*, MA (CNAAB)
- 15 17 London (Goldsmiths'), *Physical education*, MA (CNAAB)
- 15 18 London (Goldsmiths'), *Physical education*, MA (CNAAB)
- 15 19 London (Goldsmiths'), *Physical education*, MA (CNAAB)
- 15 20 St Andrews, *Physical education*, MSc
- 15 21 South Glamorgan IHE, *Human movement studies*, MEd (Wales)
- 15 22 Surrey, *Dance studies*, MA
- 15 23 West Sussex IHE (Bognor Regis), *Sports science*, MPhil (CNAAB)

### Certificates and diplomas

- 15 24 Dunfermline CPE, *Recreation and leisure practice*, Diploma (CNAAB)
- 15 25 Dunfermline CPE, *Sports coaching*, Certificate/Diploma
- 15 26 Leeds, *Physical education*, Diploma
- 15 27 London (Goldsmiths'), *Education with special reference to dance*, Diploma

# 16 English and American studies

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 16:1 Aberdeen, *English language and literature*, MLitt/PhD
- 16:2 Aston, *Modern languages*, MPhil/PhD
- 16:3 Belfast, *English*, MA/PhD
- 16:4 Birmingham, *English language and literature*, MA/MLitt/PhD
- 16:5 Birmingham, *Shakespeare studies*, MA/MLitt/PhD
- 16:6 Birmingham Poly, *English and communication studies*, MPhil/PhD (CNA)
- 16:7 Brighton Poly, *Cultural studies*, MPhil/PhD (CNA)
- 16:8 Brighton Poly, *English literature*, MPhil/PhD (CNA)
- 16:9 Bristol, *English*, MA/MLitt/PhD
- 16:10 Bristol Poly, *English studies*, MPhil/PhD (CNA)
- 16:11 Buckingham, *English literature*, MPhil/DPhil
- 16:12 Cambridge, *English*, MLitt/PhD
- 16:13 Dundee, *English*, MPhil/PhD
- 16:14 Durham, *English*, MA/MLitt/PhD
- 16:15 East Anglia, *American studies*, MPhil/PhD
- 16:16 East Anglia, *Literature*, MPhil/PhD
- 16:17 Edinburgh, *English language and literary stylistics*, PhD
- 16:18 Edinburgh, *English literature*, MLitt/PhD
- 16:19 Essex, *Literature*, MPhil/PhD
- 16:20 Exeter, *English*, MPhil/PhD
- 16:21 Glasgow, *English language*, MLitt/PhD
- 16:22 Glasgow, *English literature*, MLitt/PhD See page 131
- 16:23 Glasgow, *Scottish literature*, MLitt/PhD
- 16:24 Hull, *English language and literature*, MPhil/PhD
- 16:25 Keele, *American studies*, MA/PhD
- 16:26 Keele, *English language and literature*, MA/PhD
- 16:27 Kent, *English and American literature*, MA/PhD
- 16:28 Kingston Poly, *English literature*, MPhil/PhD (CNA)
- 16:29 Lancaster, *English*, MPhil/PhD
- 16:30 Lancaster, *English literary research*, MA
- 16:31 Lancaster, *Linguistics and modern English language*, MPhil/PhD
- 16:32 Leeds, *English*, MPhil/PhD See page 132
- 16:33 Leicester, *American studies*, MA/MPhil/PhD
- 16:34 Leicester, *English*, MA/MPhil/PhD
- 16:35 Leicester, *Victorian studies*, MA/MPhil/PhD
- 16:36 Liverpool, *English language and literature*, MPhil/PhD
- 16:37 London (Birkbeck), *English*, MPhil/PhD
- 16:38 London (Goldsmiths'), *English*, MPhil/PhD
- 16:39 London (KQC), *English*, MPhil/PhD
- 16:40 London (Queen Mary), *English*, MPhil/PhD
- 16:41 London (RHBC), *English*, MPhil/PhD
- 16:42 London (UC), *English language and literature*, MPhil/PhD
- 16:43 London (Westfield), *English*, MPhil/PhD

- 6 44 Loughborough, *English and drama*, MPhil/PhD  
 6 45 Manchester, *English language and literature*, MPhil/PhD  
 6 46 Manchester Poly, *English and history*, MPhil/PhD (CNAAC)  
 6 47 Newcastle, *English language and literature*, MLitt/PhD  
 6 48 Newcastle Poly, *English*, MPhil/PhD (CNAAC)  
 6 49 Nottingham, *American studies*, MPhil/PhD  
 6 50 Nottingham, *English*, MPhil/PhD  
 6 51 Open, *Literature*, BPhil/MPhil/PhD  
 6 52 Oxford, *English language and literature*, MLitt/DPhil  
 6 53 Reading, *English*, MPhil/PhD  
 6 54 St Andrews, *English language and literature*, MPhil/PhD  
 6 55  
 6 56  
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 6 58 Snerriela City Poly, *English*, MPhil/PhD (CNAAC)  
 6 59  
 6 60  
 6 61 Strathclyde, *English studies*, MLitt/PhD  
 6 62 Sussex, *English literature*, MPhil/DPhil  
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 6 69 Wales (Swansea), *English language and literature*, MA/PhD  
 6 70 Wales (Swansea), *English language and literature*, MA/PhD  
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France, America, children's lit, function of drama in education, Latin American lit, poetics  
 Contact RT Jones, Senior Lecturer

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 16:78 Aberdeen, *English language as a literary medium*, MLitt
- 16:79 Aberdeen, *Literature of region and nation*, MLitt
- 16:80 Aberdeen, *Scottish literature*, MLitt
- 16:81 Belfast, *Applied English linguistics*, MA
- 16:82 Belfast, *English (Anglo-Irish studies)*, MA
- 16:83 Belfast, *English (medieval studies)*, MA
- 16:84 Birmingham, *Shakespeare studies*, MA
- 16:85 Bristol, *Medieval English literature*, MA
- 16:86 College of Librarianship (Wales), *Periodical press in Britain 1580-1914*, MA (Wales)
- 16:87 Durham, *English language and medieval literature*, MA
- 16:88 East Anglia, *Creative writing*, MA
- 16:89 East Anglia, *Modern literature*, MA
- 16:90 East Anglia, *Modern literature*, MA
- 16:91 Edinburgh, *English language and literary stylistics*, MLitt/MSc/Diploma
- 16:92 Edinburgh, *English literature*, MSc
- 16:93 Edinburgh, *English studies*, MLitt
- 16:94 Essex, *American poetry*, MA
- 16:95 Essex, *Literary geography of England*, MA
- 16:96 Exeter, *English language and literature*, MA
- 16:97 Glasgow, *English language*, MPhil
- 16:98 Glasgow, *Hispanic studies and English*, MPhil
- 16:99 Glasgow, *Modern English language*, MPhil/Diploma See page 131
- 16:100 Glasgow, *Victorian and modern literature*, MPhil
- 16:101 Hatfield Poly, *English*, MA (CNA), 3 yrs p-t; *course content*: lit in crisis 1890-1930; detailed study of lit of period, sp attention to questions of lit theory and nature of lit criticism; notion of crisis considered in such contexts as experimentation in lit form, lit as direct or indirect response to specific crises, writers' and critics' conceptualisation of own practice, relationship of writer to historical and cultural determinants; yr 1: crisis in mod society and lit, lit and crisis in consciousness; yr 2: crisis in lit form and expression, lit and 1st World War; intake in alternate yrs, next intake 1987. Contact Dr Winifred Crombie
- 16:102 Hull, *Music and poetry of the Elizabethan Renaissance*, MA
- 16:103 Hull, *Women and literature*, MA
- 16:104 Keele, *American literature*, MA
- 16:105 Keele, *Victorian studies*, MA
- 16:106 Kent, *Modern literature (since 1850)*, MA
- 16:107 Lancaster, *Creative writing*, MA
- 16:108 Lancaster, *English language studies*, MA
- 16:109 Lancaster, *Medieval studies*, MA
- 16:110 Leeds, *American literature*, MA See page 132
- 16:111 Leeds, *Anglo-German literary relations*, MA
- 16:112 Leeds, *English language and medieval literature*, MA See page 132
- 16:113 Leeds, *English literature*, MA See page 132
- 16:114 Leeds, *English literature and education*, MA See page 132
- 16:115 Leeds, *Modern English*, MA
- 16:116 Leeds, *Victorian literature*, MA See page 132
- 16:117 Leicester, *Modern English and American literature*, MA
- 16:118 Leicester, *Victorian studies*, MA
- 16:119 Liverpool, *English renaissance literature*, MA
- 16:120 Liverpool, *Literature of the Victorian period*, MA
- 16:121 Liverpool, *Medieval English language and literature*, MA
- 16:122 London (Birkbeck), *Modern English literature*, MA

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 16 134 | . . . . .  
 16 135 Nottingham, *English*, MA  
 16 136 Nottingham, *Linguistics and modern English language*, MA  
 16 137 Open, *Literature*, MA  
 16 138 Oxford, *English*, MLitt  
 16 139 Oxford, *English studies*, MPhil  
 16 140 Reading, *Literature and the visual arts 1840 1940*, MA  
 16 141 Reading, *Middle English literature*, MA  
 16 142 Reading, *Politics, patronage and literature 1520 1660* MA  
 16 143 St Andrews, *Scottish literature*, MPhil  
 16 144 St Andrews, *Shakespeare studies*, MPhil  
 16 145 Sheffield, *English history and literature 1880 1920*, MA  
 16 146 Sheffield, *English language*, MA  
 16 147 Sheffield, *Language and philosophy of criticism* MA  
 16 148 Sheffield, *Modern and contemporary poetry*, MA  
 16 149 Sheffield, *Modern English language and linguistics*, MA  
 16 150 Southampton, *Romanticism and modernism* MA  
 16 151 Stirling, *Modern poetry in English*, MPhil 1 yr f t aims to develop expertise in techniques of reading and analysing poetry and to provide hist survey of development of mod poetry through close exam of work of eg Hardy Yeats Eliot Pound Auden Stevens McDiarmid Williams Lowell assessment by essays exams and dissertation Contact MJ Gray  
 16 152 Sussex, *Critical theory* MA  
 16 153 Sussex, *English literature*, MA  
 16 154 Sussex, *Renaissance English literature*, MA  
 16 155 Sussex, *Twentieth-century English literature*, MA  
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 16 160 " " " "  
 16 161 Wales (Bangor), *Arthurian literature*, MA/Diploma  
 16 162 Wales (Bangor), *English*, MA/Diploma  
 16 163 Wales (Bangor), *English as a second or foreign language*, MA/Diploma  
 16 164 Wales (Cardiff), *English* MA  
 16 165 Wales (Lampeter), *English*, MA  
 16 166 Wales (Swansea), *Modern French and English literature*, MA  
 16 167 Wales (Swansea), *Modern Welsh writing in English*, MA  
 16 168 Warwick, *English and renaissance drama* MA  
 16 169 W " " " " " "  
 16 170 " " " " " "



Henry James, Thomas Hardy, Joseph Conrad, George Gissing, Virginia Woolf; *Ezra Pound and modern poetry*: detailed study of practice, technique and specific achievements of Pound, English and American contemporaries and successors; assessment of coursework and dissertation. Contact RT Jones, Senior Lecturer

16:171 York, *Medieval studies: age of Sutton Hoo*, MA/Diploma

16:172 York, *Medieval studies: literature and society in later Middle Ages*, MA

## Certificates and diplomas

16:173 Bretton Hall CHE, *English studies*, Advanced Diploma

16:174 Bulmershe CHE (Reading), *Children's literature*, Diploma (CNAAB)

16:175 Dundee, *English literature*, Diploma

16:176 London (Queen Mary), *English literature*, Diploma

16:177 Middlesex Poly, *Humanities*, Research Diploma

16:178 Newcastle, *English language studies*, Diploma

16:179 N Cheshire C, *English studies*, Diploma (Manchester)

16:180 Sheffield City Poly, *Teaching of English to speakers of other languages*, Diploma

16:181 Strathclyde, *English as a literary language*, Diploma

16:182 Strathclyde, *English studies*, Diploma

16:183 Ulster, *Teaching of English as a foreign language*, Diploma

16:184 Wales (UWIST), *Teaching of English as a foreign language*, Diploma

16:185 Warwick, *English literature*, Diploma

## University of Warwick: Faculty of Arts

Situated in the Warwickshire countryside close to Coventry and Birmingham, the University is easily accessible by road or rail; it is the nearest university to Stratford-upon-Avon. The library contains over half a million books; computer facilities are available in the Arts Faculty.

Academic departments – American Studies, Classics, English, Film Studies, French, German, History, History of Art, Italian, Spanish, and Theatre Studies – provide supervision leading to the degrees of MA, MPhil and PhD. Teachers from several departments come together to supervise higher degrees in Philosophy and Literature and in the Graduate Schools.

The Graduate School of Translation Studies and Comparative Literary Theory offers an MA in Comparative Literature and Literary Translation and an MA in Translation Studies and the Graduate School of Modern European Cultural History an MA with specialisation in a topic of cultural history since the 18th century. The Graduate School of Renaissance Studies teaches an MA in history, literature and culture, as well as an MA in English and European Renaissance Drama, incorporating instruction by personnel of the Royal Shakespeare Company. The Centre for the Study of Social History offers an MA in Comparative Labour History, focusing on the social history of British and American labour, 1860–1960, as well as an MA in Comparative British and European Social History.

A bridging course into these degrees is available for overseas students whose academic or linguistic background requires it.

Several University of Warwick Graduate Awards, covering fees and maintenance, are offered each year to students in the Faculty of Arts. Candidates will be considered for an award on applying for a higher degree. (Overseas candidates are not eligible for this award.)

Further information from:

Board of Graduate Studies (Arts), University of Warwick, Coventry CV4 7AL.

## University of Glasgow

### DEPARTMENT OF ENGLISH LANGUAGE

We offer a variety of approaches to the postgraduate study of English language

take a further option and write a dissertation. The course is intended for foreign students: pre-sessional courses in English and study skills are available.

MPhil (1 yr) in CONTEMPORARY OR MEDIEVAL ENGLISH or a combination of the two, intended for native speakers or foreign students with prior postgraduate or work experience. Students take three

For further information contact Ms C J Kay, Department of English Language, Glasgow G12 8QQ, UK.

**More  
information**  
is in the parent  
edition

**Graduate  
Studies**  
at your careers  
service

# THE UNIVERSITY OF LEEDS

## School of English

The following research opportunities and taught courses are offered:

**ENGLISH MPhil/PhD** Supervision available for research. Main research interests: English, American and Commonwealth literature, English language and medieval literature, modern English language studies, Icelandic studies, bibliography, and drama.

**ENGLISH LITERATURE MA** One academic year's full-time course that comprises three topics in English, American or Commonwealth literature, based on study of genre, special period, author or group of authors; also special subjects, eg bibliography and textual criticism, drama; and a research exercise.

**ENGLISH LANGUAGE AND MEDIEVAL LITERATURE MA** One year's full-time course that comprises three topics selected from Old English literature, Middle English literature, Old Icelandic language and literature, and the history and development of the English language; and a research exercise.

**ENGLISH LITERATURE AND EDUCATION MA** One academic year's full-time course that comprises the teaching of English in the secondary school; two courses offered in English, American or Commonwealth literature; and a research exercise.

**RENAISSANCE TO RESTORATION MA** One academic year's full-time course on English literature 1588-1688 in its historical context; comprising one core-course on the intellectual background; two courses chosen from seven special subjects; and a research exercise.

**VICTORIAN LITERATURE MA** One academic year's full-time course that comprises themes and perspectives in Victorian literature; two courses selected from the Victorian novel, Victorian theatre, Victorian poetry, and the Spirit of the Age - Victorian prose; and a research exercise.

**COMMONWEALTH LITERATURE MA** One academic year's full-time course that comprises three courses selected from English language in the Commonwealth, West African theatre and drama, African and Caribbean literature, Australian literature, Canadian literature, and British and Indian writers; and a research exercise.

**AMERICAN LITERATURE MA** One academic year's full-time course that comprises three courses selected from American drama and fiction since 1945, 20th century American poetry, the American short story, and a special topic (eg Civil War literature); and a research exercise.

**ICELANDIC STUDIES MA/Diploma** One to two years' full-time course that covers old Icelandic language and literature, modern Icelandic language and literature, and the history and institutions of Iceland.

**BIBLIOGRAPHY, PUBLISHING AND TEXTUAL STUDIES MA** One year's full-time course that comprises analytical bibliography and research techniques; textual criticism, theory and practice; history of the book and publishing history; a practical project in printing, bookbinding, or papermaking; and a research exercise.

*Further information from: School of English, The University of Leeds, Leeds LS2 9JT.*

## 17 History

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory Postgraduate studies' section.*

- 17.1 Aberdeen, History, MLitt/PhD  
17.2 Belfast, History, MA/PhD  
17.3 Birmingham, Ancient history and archaeology, MA/MLitt/PhD  
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17.7 Bristol, History, MLitt/PhD

- 17:14 Durham, *History*, MA/MPhil/PhD  
17:15 East Anglia, *European history*, MPhil/PhD  
17:16 East Anglia, *History*, MPhil/PhD  
17:17 Edinburgh, *Ancient history*, MLitt/PhD  
17:18 *Edinburgh, History*, MPhil/PhD  
17:19 *Edinburgh, History*, MPhil/PhD  
17:20 *Edinburgh, History*, MPhil/PhD  
17:21 *Edinburgh, History*, MPhil/PhD  
17:22 *Edinburgh, History*, MPhil/PhD

- 17.23  
17.24 Glasgow, *American history*, MLitt/PhD  
17.25 Glasgow, *Medieval history*, MLitt/PhD  
17.26 Glasgow, *Modern history*, MLitt/PhD  
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community hist (esp Staffs, Shropshire, Cheshire); *US hist*: see Regional studies: America. Contact JHY Briggs

- 17:31 Kent, *History*, MA/PhD
- 17:32 Kingston Poly, *History*, MPhil/PhD (CNAAC)
- 17:33 Lancaster, *History*, MPhil/PhD
- 17:34 Leeds, *History*, MA/MPhil/PhD
- 17:35 Leicester, *History*, MA/MPhil/PhD
- 17:36 Leicester, *Victorian studies*, MA/MPhil/PhD
- 17:37 Liverpool, *History*, MPhil/PhD; supervision available, staff research interests range from early med to recent mod hist and from hist of Britain to hist of 3rd World, sp interest and supervision in: 9th-20th-cent British hist; recent Irish hist; 14th-, 15th-, 18th-20th-cent French hist; 18th-20th-cent USA and Latin-American hist; W African hist; SE Asian hist; socio-demographic and local hist with sp interest in hist of Cheshire. Contact Professor EP Hennock
- 17:38 London (Birkbeck), *History*, MPhil/PhD
- 17:39 London (Goldsmiths'), *History*, MPhil/PhD
- 17:40 London (Inst Historical Research), *Historical research*, MPhil/PhD
- 17:41 London (KQC), *Ecclesiastical history*, MPhil/PhD
- 17:42 London (KQC), *History*, MPhil/PhD
- 17:43 London (LSE), *International history*, MPhil/PhD
- 17:44 London (Queen Mary), *History*, MPhil/PhD
- 17:45 London (RHBC), *History*, MPhil/PhD
- 17:46 London (SOAS), *History of Africa*, MPhil/PhD
- 17:47 London (SOAS), *History of South Asia*, MPhil/PhD
- 17:48 London (SOAS), *History of South East Asia*, MPhil/PhD
- 17:49 London (SOAS), *History of the Far East*, MPhil/PhD
- 17:50 London (SOAS), *History of the Near and Middle East*, MPhil/PhD
- 17:51 London (UC), *History*, MPhil/PhD
- 17:52 London (Warburg), *Combined historical studies*, MPhil/PhD
- 17:53 London (Westfield), *History and history of art*, MPhil/PhD
- 17:54 Loughborough, *History*, MPhil/PhD
- 17:55 Manchester, *History*, MPhil/PhD
- 17:56 Manchester Poly, *English and history*, MPhil/PhD (CNAAC)
- 17:57 Manchester Poly, *Manchester studies*, MPhil/PhD (CNAAC)
- 17:58 Newcastle, *History*, MLitt/PhD
- 17:59 Newcastle Poly, *History*, MPhil/PhD (CNAAC)
- 17:60 N Staffs Poly, *History*, MPhil/PhD (CNAAC)
- 17:61 Nottingham, *American studies*, MPhil/PhD
- 17:62 Nottingham, *History*, MPhil/PhD
- 17:63 Open, *History*, BPhil/MPhil/PhD
- 17:64 Open, *Roman Britain*, BPhil/MPhil/PhD
- 17:65 Oxford, *Ancient history*, MLitt/DPhil
- 17:66 Oxford, *Modern history*, MLitt/DPhil
- 17:67 Poly of Central London, *History*, MPhil/PhD (CNAAC)
- 17:68 Poly of North London, *History, philosophy and European studies*, MPhil/PhD (CNAAC)
- 17:69 Portsmouth Poly, *Historical and literary studies*, MPhil/PhD (CNAAC)
- 17:70 Reading, *History*, MPhil/PhD See page 139
- 17:71 St Andrews, *Medieval history*, MPhil/PhD
- 17:72 St Andrews, *Modern history*, MPhil/PhD
- 17:73 St Andrews, *Scottish history*, MPhil/PhD
- 17:74 St Paul & St Mary's C, *History*, MPhil/PhD (CNAAC)
- 17:75 Salford, *Politics and contemporary history*, MSc/PhD
- 17:76 Sheffield, *History*, MPhil/PhD
- 17:77 Sheffield City Poly, *History*, MPhil/PhD (CNAAC)
- 17:78 Southampton, *History*, MPhil/PhD, supervision available, staff research interests: W church 1100-1300; English political, religious and social hist c1485-1600; med historiography; 12th-cent German church; topography of Southampton; monastic estates; social hist of architecture and arts

- 17 79 Stirling *History* MLitt/PhD  
 17 80 Strathclyde *History* MA/PhD  
 17 81 Sunderland Poly *History* MPh I/PhD (CNAAB)  
 17 82 Sussex *History* MPhil/DPhil  
 17 83 Sussex, *Intellectual history* MPhil/DPhil  
 17 84 Sussex *Renaissance studies* MPhil/DPhil  
 17 85 Teesside Poly *History* MPh I/PhD (CNAAB)  
 17 86 Thames Poly *History* MPh I/PhD (CNAAB)  
 17 87 Trent Poly *History and geography* MPh I/PhD (CNAAB)  
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 17 91 Wales (Bangor) *History* MA/PhD See page 139  
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 7 101 York, *History* MA/MPh I/DPhil

## Higher degrees by instruction

*Cand dates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 7 102 " " " " " "  
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 7 106 Brighton Poly *Regional history* MA/Diploma (CNAAB)  
 7 107 Bristol Poly *Historical studies* MA (CNAAB)  
 7 108 Buckingham *History* MA/Diploma  
 7 109 College of Librarianship (Wales) *Periodical press in Britain 1580-1914* MA (Wales)  
 7 110 Coventry (Lanchester) Poly *Modern historical and political studies* MA/Diploma (CNAAB)  
 7 111 Durham *Modern Middle Eastern history* MA  
 7 112 East Anglia *English history* MA  
 7 113 East Anglia *European history* MA  
 7 114 East Anglia *Local and regional history* MA  
 7 115 Edinburgh *History* MSc  
 7 116 Edinburgh *Scottish history* MLitt  
 7 117 Essex *Comparative history, modernisation and development* MA/Diploma  
 7 118 Glasgow *History* MPhil  
 7 119 Huddersfield Poly *History* MA (CNAAB)

- 17:120 Hull, *Historical computation*, MA**
- 17:121 Keele, *United States history and institutions*, MA**
- 17:122 Keele, *Victorian studies*, MA, 2 yrs f-t; 3 yrs p-t; *course comprises: Victorian society: work, culture, religion and authority; Victorian lit: treatment in imaginative lit of social and other themes in 19th-cent lit with sp ref to Dickens, George Eliot, Tennyson, Browning and Hardy; thought and culture in 19th-cent England: J S Mill and utilitarianism; Macaulay, Carlyle and uses of hist; J H Newman, theology and religion; survival, revival and innovation in art and architecture; Matthew Arnold and politics of culture; new scientific temper; art and society: Ruskin and William Morris; exam and course paper in each of above areas, dissertation; transfer to PhD possible after 1 yr f-t or 2 yrs p-t: PhD students complete all course work for MLitt but in place of dissertation write a PhD thesis, presented on completion of 3 yrs (f-t), 5 yrs (p-t). Contact JHY Briggs***
- 17:123 Kent, *Modern history*, MA**
- 17:124 Lancaster, *Historical research*, MA *See page 138***
- 17:125 Leeds, *British history*, MA**
- 17:126 Leeds, *Education and local history*, MA**
- 17:127 Leeds, *International history*, MA**
- 17:128 Leeds, *Local and regional history*, MA**
- 17:129 Leeds, *Medieval studies*, MA**
- 17:130 Leicester, *English local history*, MA, 1c yr f-t; training in use of documentary and visual evidence of local hist and in hist reconstruction of local and provincial society in England; methods and materials of English local hist, English topography (gen and selected region for detailed study, selected urban and rural communities), regional popular culture, local societies and change, palaeography; 4 exam papers and dissertation. Contact Registrar (Higher Degrees)**
- 17:131 Leicester, *Victorian studies*, MA**
- 17:132 Liverpool, *French and history*, MA**
- 17:133 Liverpool, *Local history*, MA**
- 17:134 Liverpool, *Medieval studies*, MA**
- 17:135 London (Birkbeck), *Commonwealth history*, MA**
- 17:136 London (Birkbeck), *Early modern English history*, MA**
- 17:137 London (Birkbeck), *Historical geography*, MA**
- 17:138 London (Birkbeck), *Medieval studies*, MA**
- 17:139 London (Birkbeck), *Renaissance studies*, MA**
- 17:140 London (Birkbeck), *Victorian studies*, MA**
- 17:141 London (Goldsmiths'), *History of the European labour movement*, MA**
- 17:142 London (Inst Commonwealth Studies), *Area studies: Commonwealth*, MA**
- 17:143 London (Inst Ed), *History in education*, MA**
- 17:144 London (KQC), *English and European history of the twelfth and thirteenth centuries*, MA**
- 17:145 London (KQC), *European, literary and historical studies*, MA**
- 17:146 London (LSE), *International history*, MA/MSc**
- 17:147 London (RHBC), *Late antique and Byzantine studies*, MA**
- 17:148 London (RHBC), *Later medieval studies*, MA**
- 17:149 London (SOAS), *Oriental and African history*, MA**
- 17:150 London (SSEES), *Central and Eastern European history*, MA**
- 17:151 London (UC), *History and social anthropology*, MA**
- 17:152 London (Warburg), *Combined historical studies: the Renaissance*, MPhil**
- 17:153 London (Westfield), *Medieval studies*, MA, 1 yr f-t (deg in arts subj usually req); opportunity for interdisciplinary and/or comparative study within wide range of disciplines; *course content: med lang not studied at u-g level, methods and techniques in med studies; 2 specialised options within hist, hist of art, med Latin, Icelandic, Old English, Middle English, Old High German, Middle High German, Old Saxon, Old French, Old Provencal, Old Spanish, Old Galician, Old Portuguese, Catalan, Old Italian; exam, dissertation. Contact Registrar***
- 17:154 Loughborough, *History and education*, MA**
- 17:155 Manchester Poly, *History of the Manchester region*, MA (CNA)**
- 17:156 Newcastle, *Ancient history*, MA**
- 17:157 Nottingham, *American studies*, MA**
- 17:158 Nottingham, *Local and regional history*, MA**
- 17:159 Oxford, *Ancient history*, MPhil/MS**

- 17 160 Oxford, *European and English history* MPhil  
 17 161 Oxford *History of British Commonwealth and Empire and of United States* MPhil  
 17 162 Oxford *Modern history* MSt  
 17 163 Poly of Central London *Twentieth century historical studies* MA  
 17 164 Reading *History of the English landscape* MA See page 139  
 17 165 Reading *Medieval studies* MA/MPhil  
 17 166 Reading *Politics patronage and literature 1520 1660* MA  
 17 167 St Andrews, *Classics and ancient history* MLitt/Diploma  
 17 168 St Andrews, *Medieval history* MLitt/MPhil/Diploma  
 17 169 St Andrews *Medieval studies* MLitt/Diploma  
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 17 175 Sussex, *History* MA  
 17 176 Sussex, *Intellectual history* MA  
 17 177 Sussex, *Renaissance studies* MA  
 17 178 Teesside Poly, *Local history* MA (CNAA)  
 17 179 Thames Poly, *Historical studies* MA (CNAA)  
 17 180 Ulster, *Early modern history* MA/Diploma  
 17 181 Ulster, *Modern and contemporary history* MA/Diploma  
 17 182 Wales (Aberystwyth) *History* MA  
 17 183 Wales (Bangor), *Tudor government* MA  
 17 184 Wales (Bangor), *Welsh history* MA  
 17 185 Wales (Cardiff), *History* MA  
 17 186 Wales (Cardiff), *Welsh history* MA  
 17 187 Wales (Swansea) *Ancient history* MA  
 17 188 Wales (Swansea) *History*, MA  
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### Certificates and diplomas

- 17 199 Cambridge, *Historical studies* Diploma  
 17 200 Lancaster, *Historical studies* Diploma See page 138  
 17 201 Manchester Poly, *Local history* Diploma  
 17 202 New C (Durham) *Teaching of history* Diploma (Hist Assoc)  
 17 203 Portsmouth Poly, *English local history* Diploma



# University of Lancaster

**MA Modern social history** A one year course with a choice of three of four optional modules, or a dissertation. The course is designed to provide a broad knowledge of the social history of England and Wales from 1800 to the present. The modules are: *The Industrial Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*. The course is designed to provide a broad knowledge of the social history of England and Wales from 1800 to the present. The modules are: *The Industrial Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*.

**MA History of science** A one year course with a choice of three of four optional modules, or a dissertation. The course is designed to provide a broad knowledge of the history of science from 1800 to the present. The modules are: *The Scientific Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*. The course is designed to provide a broad knowledge of the history of science from 1800 to the present. The modules are: *The Scientific Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*.

**MA Historical research** A one year course with a choice of three of four optional modules, or a dissertation. The course is designed to provide a broad knowledge of the history of research from 1800 to the present. The modules are: *The Scientific Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*. The course is designed to provide a broad knowledge of the history of research from 1800 to the present. The modules are: *The Scientific Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*.

**MA Modern social history** A one year course with a choice of three of four optional modules, or a dissertation. The course is designed to provide a broad knowledge of the social history of England and Wales from 1800 to the present. The modules are: *The Industrial Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*. The course is designed to provide a broad knowledge of the social history of England and Wales from 1800 to the present. The modules are: *The Industrial Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*.

**Diploma Historical studies** A two year course with a choice of three of four optional modules, or a dissertation. The course is designed to provide a broad knowledge of the history of studies from 1800 to the present. The modules are: *The Scientific Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*. The course is designed to provide a broad knowledge of the history of studies from 1800 to the present. The modules are: *The Scientific Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*.

**MA Modern social history** A one year course with a choice of three of four optional modules, or a dissertation. The course is designed to provide a broad knowledge of the social history of England and Wales from 1800 to the present. The modules are: *The Industrial Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*. The course is designed to provide a broad knowledge of the social history of England and Wales from 1800 to the present. The modules are: *The Industrial Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*.

**MA Modern social history** A one year course with a choice of three of four optional modules, or a dissertation. The course is designed to provide a broad knowledge of the social history of England and Wales from 1800 to the present. The modules are: *The Industrial Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*. The course is designed to provide a broad knowledge of the social history of England and Wales from 1800 to the present. The modules are: *The Industrial Revolution*, *The Victorian Age*, *The Edwardian Age*, *The Interwar Period*, *The Second World War*, *The Post-war Period*, *The Modern Period*.

## WESTFIELD COLLEGE

(University of London)

### FACULTY OF ARTS

#### MA Courses available

(One year full-time)

(Two years part-time)

Classics

German

Hispanic Studies

Medieval Studies (full-time only)

Romance Languages and Literatures

(French, Italian, Spanish)

#### Supervision for research degrees

available in departments of

Classics

Drama

English

French

German

History

History of Art

Spanish

Westfield College, founded in 1882, is situated in a garden site of approximately ten acres, off the Finchley Road, roughly midway between Golders Green and Swiss Cottage about a quarter of a mile from the edge of Hampstead Heath. It is within easy reach of central London, the University of London Union, the Senate House Library, and other institutions and colleges of the University. The College's Caroline Steel Library contains over 100,000 books and pamphlets and more than 20,000 bound volumes of periodicals. Computing facilities are provided by the Computer Unit, where particular attention is paid to the needs of arts students.

Further information on postgraduate study in the College is available from the Registrar, Westfield College, Kidderpore Avenue, Hampstead, London NW3 7ST.

**University  
College of North Wales,  
Bangor**

**MA/PhD: History,  
Welsh History, Archaeology**

Supervision available for research  
Archaeology, Welsh library, fieldwork  
opportunities. Main staff interests include  
Roman Britain, Celtic bronze age and  
early Christian, early medieval church,  
maritime history and archaeology,  
medieval and early modern Wales,  
medieval and renaissance political  
thought, early modern urban history,  
political and ecclesiastical history of  
Tudor England, cultural history of the  
industrial revolution, modern Wales,  
modern British foreign policy, law and  
government in twentieth century Britain

*Further information from  
The Registrar,  
University College of North Wales, Bangor,  
Gwynedd LL57 2DG*

**The University of Reading  
HISTORY and  
MEDIEVAL STUDIES**

**MA/MPHil/PhD**

**MA** One year full time or two-year part time  
courses are offered by the **History Department**  
in the **HISTORY OF ENGLISH LANDSCAPE** and by  
the **Graduate Centre for Medieval Studies** in  
an inter-disciplinary course including  
palaeography and research technique and a wide  
range of historical literary and art history  
options. Examinations are by course work,  
dissertation and written paper.

**MPHil/PhD** The **History Department** offers  
supervision in most aspects of English and  
European history from c 1000 AD to the present.

A course in the first year and submit a  
dissertation in the second year.

Further information from The Director of  
Graduate Studies, Department of History  
University of Reading, Berks RG6 2AA.



**The University of Sheffield  
DEPARTMENT OF HISTORY**

The Department -

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# 18 International studies

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 18:1 Aberdeen, *Politics*, MLitt/PhD
- 18:2 Birmingham, *Political science and international studies*, MSocSc/MPhil/PhD
- 18:3 Bradford, *Peace studies*, MPhil/PhD
- 18:4 Coventry (Lanchester) Poly, *Politics and history*, MPhil/PhD (CNA)
- 18:5 East Anglia, *Politics including international relations*, MPhil/PhD
- 18:6 Edinburgh, *Public international law*, MPhil/PhD
- 18:7 Keele, *International relations*, MA/PhD; supervision available for research in following fields: *international peace-keeping and security*: international peace-keeping; arms control and disarmament; *international organisation*: approaches to organisations of international society, political aspects of UN, European unification, League of Nations, Permanent Court of International Justice, pacific settlement of international disputes; *theory of international relations*: hist of international thought; problems of sovereignty, intervention, human rights; cultural approaches to world politics; theory of international law and morality; *British foreign policy*: British foreign policy 1919-57, British war aims in 2nd World War, civil aviation, British relations with S Africa since 1960, British security policy; current projects inc: international peace-keeping, human rights, British security policy, League of Nations, hist of international thought. Contact Dr H Suganami
- 18:8 Kent, *International relations*, MPhil/PhD
- 18:9 Lancaster, *Conflict and peace research*, MPhil/PhD
- 18:10 Lancaster, *Politics*, MPhil/PhD
- 18:11 London (Inst Commonwealth Studies), *Commonwealth studies*, MPhil/PhD
- 18:12 London (KQC), *War studies*, MPhil/PhD
- 18:13 London (LSE), *International history*, MPhil/PhD
- 18:14 London (LSE), *International relations*, MPhil/PhD
- 18:15 Manchester, *Military studies*, MPhil/PhD
- 18:16 N Staffs Poly, *International relations and politics*, MPhil/PhD (CNA)
- 18:17 Oxford, *International relations*, MLitt/DPhil
- 18:18 Reading, *European and international studies*, MPhil/PhD
- 18:19 St Andrews, *Politics (international studies)*, MPhil/PhD
- 18:20 Salford, *International studies*, MPhil/PhD
- 18:21 Southampton, *Politics*, MPhil/PhD
- 18:22 Surrey, *Linguistic and international studies*, MPhil/PhD
- 18:23 Sussex, *International relations*, MPhil/DPhil
- 18:24 Teesside Poly, *International relations*, MPhil/PhD (CNA)
- 18:25 Wales (Aberystwyth), *Economics and economic history*, MSc(Econ)/PhD
- 18:26 Wales (Aberystwyth), *International politics*, MSc(Econ)/PhD
- 18:27 Warwick, *International studies*, MPhil/PhD See page 143

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

- 18:28 Aberdeen, *Strategic studies*, MLitt

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- 42 Lancaster, *Science technology and international affairs*, MA  
43 Leeds, *International history*, MA  
44 London (Birkbeck), *Commonwealth history*, MA  
45 London (Inst Commonwealth Studies), *Area studies Commonwealth* MA  
46 -  
47 -  
48 -  
49 -  
50 Plymouth Poly, *International shipping*, MSc (CNAA)  
51 Reading, *International business and economic development*, MA  
52 Reading, *International business and economic integration*, MA  
53 Reading, *International business and international financial management*, MA  
54 Reading, *International studies*, MA  
55 Salford, *International studies*, MA See page 142  
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for MSc(SocSc) Contact F Gregory

- 57 Surrey, *International hotel management*, MSc/Diploma  
58 Sussex, *International relations*, MA  
59 Ulster, *International business and industrial development*, MBA  
60 Wales (Aberystwyth), *Strategic studies*, MSc(Econ) See page 143  
61 Wales (UWIST), *Business administration*, MBA  
62 Wales (UWIST), *International economics and banking*, MSc(Econ)  
63 Warwick, *International studies* MA

## Certificates and diplomas

- 64 Cambridge, *International law*, Diploma  
65 Lancaster, *International studies*, Diploma 1c yr f t, preparation for research for those with insufficient quals for direct entry coursework choice from politics of international insts, foreign

policy analysis, politics of security, conflicts and violence, US foreign policy since 1945, arms control and disarmament, politics of EC, foreign relations of African states, superpowers in world politics, international political economy. Contact RP Barston (I R)

- 18:66 Liverpool, *International law*, Diploma  
 18:67 London (LSE), *International and comparative politics*, Diploma  
 18:68 London (UC), *International law*, Diploma  
 18:69 Manchester, *International law*, Diploma  
 18:70 N Staffs Poly, *International marketing*, Diploma  
 18:71 Poly of Central London, *East-West trade studies*, Diploma  
 18:72 Teosside Poly, *International management*, DMS (CNA)  
 18:73 Wales (Aberystwyth), *International law and relations*, Diploma  
 18:74 Wales (UWIST), *Business administration*, DBA  
 18:75 Warwick, *International studies*, Diploma See page 143

## UNIVERSITY OF KEELE

### DEPARTMENT OF INTERNATIONAL RELATIONS - MA in DIPLOMATIC STUDIES

The MA in Diplomatic Studies is a two-year full-time programme, starting in October. For those graduates who wish to make a specialised study of international relations with a view to a diplomatic career or further advanced study. Candidates will study 4 taught courses: Diplomatic Law and Practice, Foundations of International Relations, Contemporary Issues in International Relations, A Specialized Unit in International Relations, or a Modern Foreign Language other than English in which the candidate is not already fluent. MA is assessed on the basis of continuous assessment, a written examination in each of the 4 taught courses, and a 15 000 word dissertation. For further information, write to:

Postgraduate Admissions Tutor, Department of International Relations,  
University of Keele, Staffs ST5 5BG, UK

Applications for MA in International Relations by research are also invited. Terms for all the courses are available from the Senior Tutor. Address as above.

## UNIVERSITY OF SALFORD

### INTERNATIONAL STUDIES UNIT

Director: Colin Gordon

Number of academic staff associated with the Unit: 5

Student numbers 1986-87: 45 postgraduates (full-time)

The International Studies Unit is based in London, at Regent's College, Regent's Park. The Unit organises programmes of advanced study and research leading to the degree of MA in International Studies especially designed for the needs of overseas students.

#### Main Research Interests

The Unit welcomes applications from students wishing to read for an MPhil or PhD by research. Staff are available to supervise students in the field of International Relations and in areas covered by the MA International Studies programme, ie International Economics, International Organisation, International Relations, Diplomatic History and Politics, Information and Media Studies, International Law. The Unit may also be able to arrange supervision in other areas and potential students should contact the Director for further details.

#### MA in International Studies

The distinctive feature of the MA programme is the blend of academic disciplines with professional studies. All students take courses in International Economics, International Organisation, International Relations and Geography and International Strategic Studies. In addition, students select one option from a list which includes the following: Diplomatic Practice and Procedure, Information and Media Studies, International Law, Arabic-English and Chinese-English Translation.

The MA programme covers a minimum of one year's full-time study and includes an examination and the submission of a dissertation. The courses offered in the programme vary according to availability of staff.

#### Entry requirements and applications

Candidates for the MA programme or a research degree should have a first degree or an appropriate qualification equivalent to a degree, and should satisfy the University's English language requirement.

Further information on how to apply is available from The Director, International Studies Unit, University of Salford, Regent's College, Regent's Park, London NW1 4NS. Telephone 01-486 5694. Telex 668680 (SULIB).

## WARWICK UNIVERSITY INTERNATIONAL STUDIES

### *Professor*

R Skidelsky, MA, DPhil Oxford FRHistS, FRSL  
(Chairman)

### *Senior Lecturer*

B G Buzan, BA British Columbia, PhD London

### *Lecturers*

C A Jones, MA, PhD Cambridge

S A G Rizvi, MA Dacca, DPhil Oxford FRHistS

Programmes of instruction and supervision are available which lead to the degrees of MA,

MPhil and PhD in International Studies. In addition, the Department offers a **Postgraduate Diploma in International Studies**

The research interests of the current staff are  
Political Economy, Development, Imperialism

The Department is an interdisciplinary one which works in close association with the Departments of Politics, Economics and History, and the School of Law

A course prospectus giving more detailed information is available from The Department of International Studies University of Warwick, Coventry CV4 7AL.

## University College of Wales Aberystwyth MSc (Econ): STRATEGIC STUDIES

*Length of programme* 1 calendar year, commencing 1 October

*Qualifications for entry* A good honours degree in politics or a related subject

rence arms control the peace movement etc  
Applications for PhD research in International Politics are also invited

# 19 Languages and linguistics: general

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 19:1 Aston**, *Modern languages*, MPhil/PhD; supervision available, research interests in following areas: *contemp French and German studies*: French political and social studies, German political and social studies, European social and intellectual hist; *lang and linguistic studies*: French lang studies, German lang studies, English lang studies, lang learning and teaching, lang planning and use, lang and computing. Contact Professor DE Ager
- 19:2 Belfast**, *French and romance philology*, MA/PhD
- 19:3 Bradford**, *Languages and European studies*, MPhil/PhD
- 19:4 Brunel**, *Languages and linguistics*, MPhil/PhD
- 19:5 Cambridge**, *Modern and medieval languages*, MLitt/PhD
- 19:6 Coventry (Lanchester) Poly**, *Language studies*, MPhil/PhD (CNA)
- 19:7 Durham**, *English*, MA/MLitt/PhD
- 19:8 East Anglia**, *Language, linguistics and teaching English as a foreign language*, MPhil/PhD
- 19:9 East Anglia**, *Linguistics*, MPhil/PhD
- 19:10 Edinburgh**, *Linguistics*, MLitt/PhD
- 19:11 Essex**, *Linguistics*, MSc/MPhil/PhD
- 19:12 Exeter**, *Linguistics*, MPhil/PhD
- 19:13 Glasgow**, *Linguistics and phonetics*, MLitt/PhD
- 19:14 Heriot-Watt**, *Languages*, MLitt/PhD
- 19:15 Lancaster**, *Linguistics and modern English language*, MPhil/PhD
- 19:16 Leeds**, *Linguistics and phonetics*, MA/MPhil/PhD
- 19:17 Liverpool**, *Linguistics*, MPhil/PhD
- 19:18 Liverpool Poly**, *Languages*, MPhil/PhD (CNA)
- 19:19 London (Birkbeck)**, *Applied linguistics*, MPhil/PhD
- 19:20 London (SOAS)**, *Phonetics and linguistics*, MPhil/PhD
- 19:21 London (UC)**, *Linguistics and phonetics*, MPhil/PhD; supervision available, research interests inc: *linguistics*: syntactic, semantic and phonological theory esp within framework of generative grammar, descriptive study of particular langs, sociolinguistics, psycholinguistics with sp ref to aphasia and to 1st lang acquisition, phil of lang and pragmatics; *phonetics*: investigation of various aspects of speech and lang; linguistic phonetic research mainly concerned with analysis and description of sound systems of lang as contribution to gen linguistic theory and to practical study of pronunciation; subjs inc: phonetic and phonemic structure of living langs, historical phonetics, varieties of mod English; phonetics lab concerned with exptl study of perception and production of speech inc normal and abnormal conditions. Contact Professor NV Smith
- 19:22 Manchester**, *General linguistics*, MPhil/PhD
- 19:23 Nottingham**, *Linguistics*, MPhil/PhD
- 19:24 Oxford**, *Medieval and modern languages*, MLitt/DPhil
- 19:25 Poly of Central London**, *Languages*, MPhil/PhD
- 19:26 Portsmouth Poly**, *Languages and area studies*, MPhil/PhD (CNA)
- 19:27 Reading**, *Applied language studies*, MPhil/PhD
- 19:28 Reading**, *Linguistic science*, MPhil/PhD
- 19:29 Salford**, *Modern languages*, MSc/PhD; supervision available, main areas of research interests in mod lit and linguistics (theoretical and applied) esp with ref to hist and description of following langs: Arabic, English, French, German, Spanish, Italian, also various other subsid langs, also interests in regional studies. Contact Administrative Officer, Dept of Modern Languages

- 9 30 Sheffield, *Linguistics*, MPhil/PhD  
 9 31 Sheffield City Poly, *Modern languages*, MPhil/PhD (CNAAB)  
 9 32 Southampton, *Languages*, MPhil/PhD  
 9 33 Southampton, *Linguistics*, MPhil/PhD  
 9 34 Sunderland Poly, *Languages and cultures*, MPhil/PhD (CNAAB)  
 9 35 Surrey, *Linguistic and international studies*, MPhil/PhD  
 9 36 Sussex, *Cognitive studies*, MPhil/DPhil  
 9 37 Sussex, *Linguistics*, MPhil/DPhil  
 9 38 Ulster, *European studies and modern languages*, MPhil/DPhil  
 9 39 Ulster, *Communication*, MPhil/DPhil  
 9 40 Ulster, *European studies and modern languages*, MPhil/DPhil  
 9 41 Wales (Bangor), *Linguistics*, MA/PhD  
 9 42 York, *Communication studies*, MPhil/DPhil  
 9 43 York, *Language (including linguistics)*, MA/MPhil/DPhil

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 9 44 Aberdeen, *English language as a literary medium*, MLitt  
 9 45 Aston, *Teaching of English for specific purposes*, MSc/Diploma 1c yr f t (MSc) 6 mths p t

## Ager

- 9 46 Belfast, *Applied English linguistics*, MA  
 9 47 Birmingham, *Applied English linguistics*, MA/Diploma  
 9 48 Birmingham, *Special applications of linguistics*, MA  
 9 49 Bradford, *Interpreting and translating*, MA/Diploma  
 9 50 Cambridge, *Computer speech and language processing*, MPhil  
 9 51 Cambridge, *Linguistics*, MPhil  
 9 52 Christ Church C (Canterbury), *Teaching of English as a foreign language*, MA/Diploma  
 9 53 Durham, *Applied linguistics*, MA  
 9 54 East Anglia, *Linguistics*, MA  
 9 55 East Anglia, *Teaching English as a foreign language*, MA/Diploma  
 9 56 Edinburgh, *Applied linguistics*, MSc/Diploma  
 9 57 Edinburgh, *General linguistics*, MSc/Diploma  
 9 58 Edinburgh, *Phonetics*, MSc/Diploma  
 9 59 Essex, *Applied linguistics*, MA  
 9 60 Essex, *Cognitive science*, MSc  
 9 61 Essex, *Descriptive and applied linguistics*, MA  
 9 62 Essex, *Linguistics and phonetics*, MA  
 9 63 Essex, *Theoretical linguistics*, MA  
 9 64 Exeter, *Linguistics*, MA/Diploma 1 yr f t, course content: theoretical linguistics, transformational generative grammar, systemic grammar, semantics, phonetics and phonology, English vocabulary, applied linguistics, text typology, trans, lexicography, lang teaching methodology, sociolinguistics, psycholinguistics, assessment of coursework, exam, plus dissertation for MA. Contact Dr Connor Ferris.  
 9 65 Glasgow, *Linguistics and phonetics*, MPhil  
 9 66 Hatfield Poly, *Linguistics with special reference to its applications*, MA (CNAAB) 2 yrs p t (first deg in linguistics not req but accepted) designed for those interested in adv study of lang, relevant to



those professionally concerned with lang, aims to bridge gap between academic linguistic research and interests and needs of others concerned with lang; *part 1*: nature of lang; core courses in theoretical and descriptive linguistics; *part 2*: linguistic study and its applications; social and psychol aspects of lang plus two sp interest areas (options currently available: linguistics and teaching of lang skills, linguistics and lit, linguistics and English as a foreign lang); *part 3*: dissertation; assessment by exams, in-course assessment, dissertation; entry in alternate yrs, next entry February 1988. Contact Dr Winifred Crombie

- 19:67 Hull, *Russian and general phonetics*, MA**  
**19:68 Kent, *Applied linguistics*, MA/Diploma**  
**19:69 Lancaster, *English language studies*, MA**  
**19:70 Lancaster, *Linguistics for English language teaching*, MA**  
**19:71 Leeds, *Linguistics*, MA/Diploma See page 149**  
**19:72 Leeds, *Linguistics and English language teaching*, MA See page 149**  
**19:73 Leeds, *Linguistics and foreign language teaching*, MA See page 149**  
**19:74 Leeds, *Logic and philosophy of language*, MA**  
**19:75 Leeds, *Speech sciences*, MA See page 149**  
**19:76 Liverpool, *Medieval studies*, MA**  
**19:77 London (Birkbeck), *Philosophy and psychology of language*, MA**  
**19:78 London (Birkbeck), *Second language learning and teaching*, MA**  
**19:79 London (Inst Ed), *Teaching of English to speakers of other languages*, MA**  
**19:80 London (RHBC), *English language and stylistics*, MA**  
**19:81 London (SOAS), *Linguistics*, MA**  
**19:82 London (SOAS), *Phonetics*, MA**  
**19:83 London (UC), *Linguistics*, MA**  
**19:84 London (UC), *Phonetics*, MA**  
**19:85 Manchester, *General linguistics*, MA/MLing**  
**19:86 Manchester, *Linguistics*, BLing**  
**19:87 Nottingham, *Linguistics and modern English language*, MA**  
**19:88 Oxford, *Comparative philology and general linguistics*, MLitt/Diploma; degs examined solely by thesis, prepared under guidance of supervisors appointed by Committee for Comparative Philology and General Linguistics; after study in Oxford of at least a year an MPhil dissertation can be expanded and submitted for the DPhil deg; facilities in these areas inc outstanding library provision, active computing service, language teaching centre and fully equipped phonetics lab; for further details write in first inst to The Secretary, Committee for Comparative Philology and General Linguistics, University Offices, Wellington Square, Oxford OX1 2JD. Contact Dr L Loughran**  
**19:89 Oxford, *General linguistics and comparative philology*, MPhil/MSt, 2 yrs f-t (MPhil), 1 yr f-t (MSt); adv study of gen linguistics and comparative philology of Indo-European langs; *coursework*: linguistic theory; plus *either*: 3 of phonetics, phonology, syntax, semantics, hist and comparative linguistics, theory of trans, hist and structure of a lang, sociolinguistics, other approved subj; *or* 3 of comparative grammar of 2 Indo-European langs or lang-gps, hist grammar of 2 langs or lang-gps selected, trans from and linguistic comment on texts in langs selected; *or* hist of one or two langs, structure of lang or langs selected and *either* trans from, and/or linguistic comment upon, texts in lang or langs selected *or* paper on phonetics, phonology, syntax, semantics, hist and comparative linguistics, or theory of trans; thesis for MPhil; for further details write in first inst to The Secretary, Committee for Comparative Philology and General Linguistics, University Offices, Wellington Square, Oxford OX1 2JD. Contact Dr L Loughran**  
**19:90 Reading, *Applied linguistics*, MA/MPhil**  
**19:91 Reading, *Linguistics*, MA/MPhil**  
**19:92 Reading, *Teaching English as a foreign language*, MA/Diploma**  
**19:93 St Andrews, *Linguistics and social anthropology*, MLitt**  
**19:94 St Mary's C (Strawberry Hill), *Linguistics in education*, MA (Surrey)**  
**19:95 Salford, *Advanced language studies*, MA/Diploma, 1c yr f-t: 2 yrs p-t (MA), 1 yr f-t: 2 yrs p-t (Diploma) (hons deg in 2 of French, Spanish and German normally req); modular course system within MA/MSc modular studies scheme (see Science, technology and society); *course content*: study of 2 langs from: French, German, Spanish; *course content*: choice of modules from list inc: French interpreting, French trans, German interpreting, German trans, Spanish interpreting, Spanish trans, theory of trans, simultaneous interpretation, extended trans, intro linguistics, gen**

stylistics aims and methods of linguistics assessment by coursework and exams plus specialised trans or project plus dissertation for MA Contact Administrative Officer, Dept of Modern Languages

9 96 Salford, *Applied linguistics with special reference to the Arab world*, MA

9 97 Salford, *Interpretation*, MA

9 98 Salford, *Translation*, MA

9 99 Salford, *Translation*, MA

100 Salford, *Translation*, MA

101 Salford, *Translation*, MA

102 Snettfield, *Modern English language and linguistics*, MA

103 Strathclyde, *Linguistics for the teaching of English language and literature*, MLitt/Diploma/Certificate See page 150

104 Sunderland Poly, *Modern literary studies*, MA/Diploma (CNA)

105 Surrey, *Translation*, MA/Diploma See page 151

106 Sussex, *Linguistics*, MA

107 Ulster, *Clinical and applied linguistics*, MSc/Diploma/Certificate

108 Ulster, *Linguistics*, MA

109 Ulster, *Linguistics*, MA

110 Ulster, *Linguistics*, MA

111 Ulster, *Linguistics*, MA

112 Wales (Bangor), *Theoretical linguistics*, MA/Diploma

113 Wales (Cardiff), *Welsh linguistic studies*, MA/Diploma

114 Wales (Lampeter), *Philosophy*, MA

115 Warwick, *English language teaching*, MA

116 Warwick, *Teaching Italian as a foreign language*, MA

117 York, *Linguistics* MA See page 149

118 York, *Linguistics and English language teaching* MA See page 149

## Certificates and diplomas

119 Bath, *Language studies (interpreting and translating)*, Diploma

120 Bristol Poly, *Foreign languages for business* Diploma

121 Ealing CHE, *English studies for language teaching methodology and materials*, Diploma

122 Essex, *Applied linguistics, phonetics and teaching of English*, Diploma

123 Huddersfield Poly, *Language and literacy* Certificate

124 Kent, *Vocational techniques for career linguists* Diploma

125 Leeds, *Phonetics of English*, Diploma See page 149

126 Leeds, *Teaching English overseas* Diploma

127 Leeds Poly, *Bilingual information administration*, Diploma

128 London (Inst Ed), *Education with special reference to role of language in education* Diploma

129 London (Inst Ed), *Teaching of English to speakers of other languages*, Diploma Certificate

130 London (SOAS), *Linguistics*, Diploma

131 London (UC), *Linguistics*, Diploma

132 Manchester, *Teaching of English to speakers of other languages*, Diploma/Certificate

133 Manchester, *Linguistics*, MA

134 Manchester, *Linguistics*, MA

135 Manchester, *Linguistics*, MA

136 Manchester, *Linguistics*, MA

137 Manchester, *Linguistics*, MA

those professionally concerned with lang, aims to bridge gap between academic linguistic research and interests and needs of others concerned with lang; *part 1*: nature of lang; core courses in theoretical and descriptive linguistics; *part 2*: linguistic study and its applications; social and psychol aspects of lang plus two sp interest areas (options currently available: linguistics and teaching of lang skills, linguistics and lit, linguistics and English as a foreign lang); *part 3*: dissertation; assessment by exams, in-course assessment, dissertation; entry in alternate yrs, next entry February 1988. Contact Dr Winifred Crombie

- 19:67 Hull, *Russian and general phonetics*, MA  
19:68 Kent, *Applied linguistics*, MA/Diploma  
19:69 Lancaster, *English language studies*, MA  
19:70 Lancaster, *Linguistics for English language teaching*, MA  
19:71 Leeds, *Linguistics*, MA/Diploma See page 149  
19:72 Leeds, *Linguistics and English language teaching*, MA See page 149  
19:73 Leeds, *Linguistics and foreign language teaching*, MA See page 149  
19:74 Leeds, *Logic and philosophy of language*, MA  
19:75 Leeds, *Speech sciences*, MA See page 149  
19:76 Liverpool, *Medieval studies*, MA  
19:77 London (Birkbeck), *Philosophy and psychology of language*, MA  
19:78 London (Birkbeck), *Second language learning and teaching*, MA  
19:79 London (Inst Ed), *Teaching of English to speakers of other languages*, MA  
19:80 London (RHBC), *English language and stylistics*, MA  
19:81 London (SOAS), *Linguistics*, MA  
19:82 London (SOAS), *Phonetics*, MA  
19:83 London (UC), *Linguistics*, MA  
19:84 London (UC), *Phonetics*, MA  
19:85 Manchester, *General linguistics*, MA/MLing  
19:86 Manchester, *Linguistics*, BLing  
19:87 Nottingham, *Linguistics and modern English language*, MA  
19:88 Oxford, *Comparative philology and general linguistics*, MLitt/Diploma; degs examined solely by thesis, prepared under guidance of supervisors appointed by Committee for Comparative Philology and General Linguistics; after study in Oxford of at least a year an MPhil dissertation can be expanded and submitted for the DPhil deg; facilities in these areas inc outstanding library provision, active computing service, language teaching centre and fully equipped phonetics lab; for further details write in first inst to The Secretary, Committee for Comparative Philology and General Linguistics, University Offices, Wellington Square, Oxford OX1 2JD. Contact Dr L Loughran  
19:89 Oxford, *General linguistics and comparative philology*, MPhil/MSt, 2 yrs f-t (MPhil), 1 yr f-t (MSt); adv study of gen linguistics and comparative philology of Indo-European langs; *coursework*: linguistic theory; plus *either*: 3 of phonetics, phonology, syntax, semantics, hist and comparative linguistics, theory of trans, hist and structure of a lang, sociolinguistics, other approved subj; *or* 3 of comparative grammar of 2 Indo-European langs or lang-gps, hist grammar of 2 langs or lang-gps selected, trans from and linguistic comment on texts in langs selected; *or* hist of one or two langs, structure of lang or langs selected and *either* trans from, and/or linguistic comment upon, texts in lang or langs selected *or* paper on phonetics, phonology, syntax, semantics, hist and comparative linguistics, or theory of trans; thesis for MPhil; for further details write in first inst to The Secretary, Committee for Comparative Philology and General Linguistics, University Offices, Wellington Square, Oxford OX1 2JD. Contact Dr L Loughran  
19:90 Reading, *Applied linguistics*, MA/MPhil  
19:91 Reading, *Linguistics*, MA/MPhil  
19:92 Reading, *Teaching English as a foreign language*, MA/Diploma  
19:93 St Andrews, *Linguistics and social anthropology*, MLitt  
19:94 St Mary's C (Strawberry Hill), *Linguistics in education*, MA (Surrey)  
19:95 Salford, *Advanced language studies*, MA/Diploma, 1c yr f-t: 2 yrs p-t (MA), 1 yr f-t: 2 yrs p-t (Diploma) (hons deg in 2 of French, Spanish and German normally req); modular course system within MA/MSc modular studies scheme (see Science, technology and society); *course content*: study of 2 langs from: French, German, Spanish; *course content*: choice of modules from list inc: French interpreting, French trans, German interpreting, German trans, Spanish interpreting, Spanish trans, theory of trans, simultaneous interpretation, extended trans, intro linguistics, gen



- 19:138 Portsmouth Poly, *Linguistics*, Diploma  
 19:139 Reading, *General and applied English linguistics*, Diploma  
 19:140 Reading, *Remedial language studies*, Diploma  
 19:141 St Mark & St John C (Plymouth), *English language teaching*, Diploma (Exeter)  
 19:142 St Mary's C (Strawberry Hill), *Teaching of English as a second language*, Diploma (Surrey)  
 19:143 Sheffield, *Linguistics*, Diploma  
 19:144 Sheffield City Poly, *Teaching of English to speakers of other languages*, Diploma  
 19:145 South Bank Poly, *Business linguist studies*, Diploma  
 19:146 Ulster, *Teaching of English as a foreign language*, Diploma  
 19:147 Wales (UWIST), *Teaching of English as a foreign language*, Diploma, 1 yr f-t (deg or approved equiv plus teacher training and/or experience req); *course content*: phonetics of mod English, description of mod English, principles and practice of lang teaching applied to TEFL, applied linguistics, practical work inc audio-visual techniques; adv instruction in English (inc pronunciation drill) for overseas students if req; exam, assessment of coursework and project. Contact Tench  
 19:148 Warwick, *English language teaching and administration*, Diploma  
 19:149 Warwick, *Language improvement and methodology*, Certificate

## THE UNIVERSITY OF EDINBURGH

School of Applied Linguistics and Language Studies (combining the Department of Applied Linguistics, the Institute of Applied Language Studies and the Language Learning Centre)

Applications are invited for entry to the following courses

*MA in Applied Linguistics*  
 A two-year course leading to a MA in Applied Linguistics, designed for students with a first degree in a language or language-related subject. The course is designed for students who wish to pursue research in applied linguistics.

*MA in English Language Teaching*  
 A two-year course leading to a MA in English Language Teaching, designed for students who wish to pursue research in English language teaching.

*MSc/Diploma in English Language Teaching*  
 Provides a firm grounding in the principles of ELT for those having a management or training role.

*MSc/Diploma in English Language and Literary Stylistics*  
 Provides a coherent introduction for teachers of English and others to the English language system and its uses especially in literary communication.

*Advanced Certificate in English Studies*  
 A six-month course for undergraduate students specialising in English, being the first two terms of the MSc in English Language and Literary Stylistics.

*Advanced Certificate in English Language Teaching*  
 A 10-week course for practising English teachers exploring current developments in the theory and practice of ELT.

*Certificate/Advanced Certificate in English Language Testing & Evaluation*

A three-level course (14 weeks in all) covering an introduction to language testing procedures and to the construction and evaluation of language tests.

Applications to study for the degrees of MLitt (2 years) and PhD (3 years) are welcomed. In appropriate cases successful completion of an MSc course may count as the first year of the MLitt/PhD.

Plans are well advanced for certificate courses in Translating and Interpreting.

Short courses for language teachers are offered at various times during the year in eg video for language teaching; classroom testing; drama for TEFL.

Further information from:

The Secretary, School of Applied Linguistics and Language Studies  
 University of Edinburgh, 14 Buccleuch Place, Edinburgh EH8 9LN

Tel: 031-667 1011 ext 6264 & 6381

## THE UNIVERSITY OF LEEDS

### Department of Linguistics and Phonetics

Applications are invited for entry to the following one-year postgraduate courses

**MA in Linguistics and English Language Teaching**

covers general linguistics, phonetics, and the theory and practice of language teaching

**MA in Linguistics and Foreign Language Teaching**

covers similar topics to the above, but directed towards teachers of foreign languages

**MA in Speech Sciences**

covers general and experimental phonetics, phonology, and a wide range of options in linguistic and phonetic aspects of normal and abnormal speech

**MA/Postgraduate Diploma in Linguistics**

covers topics in general linguistics and phonetics, independently of specific applications such as language teaching

**Postgraduate Diploma in the Phonetics of English**

provides a thorough grounding in English phonetics and phonology either as a professional qualification for specialist EFL teachers or as a basis for further work

Facilities are also available for research degrees (MA, MPhil, PhD)

Further information and application forms from: The Postgraduate Admissions Tutor, Department of Linguistics and Phonetics, University of Leeds, Leeds LS2 9JT Tel (0532) 431751

## THE UNIVERSITY OF YORK

### Department of Language and Linguistic Science

Applications are invited for entry to the following one year postgraduate courses

**MA in Linguistics and English Language Teaching** covering descriptive linguistics and language teaching theory and methodology (NB this course is only open to applicants with substantial teaching experience)

**MA in Linguistics (a)**

covering general linguistics and phonetics, psycholinguistics and sociolinguistics

**MA in Linguistics (b)**

an initial research degree open only to applicants with a first degree in Linguistics, comparable to the Department's own BA.

We also welcome applications from suitably qualified graduates for the research degrees of MPhil and DPhil

*Further information and application forms from the Graduate office,  
University of York, Heslington York YO1 5DD, England*

## UNIVERSITY OF EXETER – THE LANGUAGE CENTRE

*Applied Linguistics (EFL)*, MA, 1 yr f-t; *course content*: English Phonology, English Grammar, English varieties, Language Acquisition, Testing, Course Design, Teaching Methodology, plus options especially for use of computers; assessment by continuous coursework and exam, with dissertation.

**Contact: Dr Connor Ferris**  
– Acting Director

The Language Centre  
University of Exeter  
Queen's Building  
The Queen's Drive  
Exeter  
Devon EX4 4QH

Heriot-Watt University, Edinburgh



## Translation & Interpreting

**PhD/Masters/Diploma in Arabic-English**

Heriot Watt University, Edinburgh offers a one-year MSc (Master of Science)/Diploma course in Translation and Interpreting designed for native speakers of Arabic. The syllabus includes:

- translation Arabic-English, English-Arabic; on-sight and specialized translation
- bilateral and consecutive interpreting
- text linguistics and translation theory
- documentation and word-processing
- ancillary skills (revision, editing, etc)
- Socio-culture of the Arabic and English speaking worlds

Applications are invited for October 1987. Applicants must hold a good undergraduate degree in English studies or an equivalent qualification.

Candidates who already possess a Masters degree in the field of translation may be registered for a PhD by research.

The University's Department of Languages has an established reputation and wide experience in the area of applied language studies, including postgraduate Arabic-English translation and interpreting, of which it has been a pioneer in the UK.

Fees £3,580 (1986-87)

Further details and application forms from Admissions Secretary, Department of Languages, Heriot-Watt University, Chambers Street, Edinburgh EH1 1HX, Great Britain Tel 031-225 8432 Ext. 140

Closing date for applications. 1st September

## Programme in Literary Linguistics

**University of Strathclyde**  
**Department of English Studies**

**MLitt in LINGUISTICS for the TEACHING of  
ENGLISH LANGUAGE and LITERATURE**

A one-year full-time instructional course, including the description of English, theoretical and applied linguistics, stylistics, history of the English language in literature, curriculum development, and teaching methods with supervised research topics leading to a short dissertation. The course may be spread over more than one academic year.

Applications are also invited for the three-month Advanced Certificate, and two Diplomas (six- and nine-month); and for MPhil/PhD research in the areas of linguistics, media studies, stylistics, and educational methodology.

**Further Information from Dr Alan Durant**  
**Programme in Literary Linguistics**  
**Department of English Studies**  
**University of Strathclyde, 26 Richmond Street**  
**Glasgow G1 1XH**

## Postgraduate awards?

Read the  
editorial on  
pages 17–22

## Abbreviations

See pages 31–33

Translation (French/English, German/English,  
Norwegian/English, Arabic/English)

UNIVERSITY OF SURREY

Degree Diploma/MA

Length of course 9 months full time (Diploma)

12 months full-time (MA)

option is subject to a minimum registration of students

Examination The Diploma is assessed by examination (5

Entrance requirements A first degree in the appropriate  
language of an approved university (or equivalent)



## 20 Languages and literature: general and comparative

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 20:1 Bath, *Modern languages*, MPhil/PhD
- 20:2 Birmingham, *Contemporary cultural studies*, MA/MLitt/PhD
- 20:3 Birmingham, *Byzantine studies and modern Greek*, MA/MLitt/PhD
- 20:4 Bradford, *Interdisciplinary human studies*, MPhil/PhD
- 20:5 Bradford, *Literature and the history of ideas*, MPhil/PhD
- 20:6 Brighton Poly, *Language studies*, MPhil/PhD (CNA)
- 20:7 Buckingham, *Modern languages*, MPhil/DPhil
- 20:8 Cambridge, *Modern and medieval languages*, MLitt/PhD
- 20:9 Cambridge, *Oriental studies*, MLitt/PhD
- 20:10 East Anglia, *Comparative literature*, MPhil/PhD
- 20:11 East Anglia, *European literature*, MPhil/PhD
- 20:12 Essex, *Literature*, MPhil/PhD
- 20:13 Huddersfield Poly, *Languages and literature*, MPhil/PhD (CNA)
- 20:14 Kent, *Comparative literary studies*, MA/PhD
- 20:15 London (LSE), *Language studies*, MPhil/PhD
- 20:16 Manchester, *Comparative literary studies*, MPhil/PhD
- 20:17 Manchester Poly, *Languages*, MPhil/PhD (CNA)
- 20:18 Napier C (Edinburgh), *Humanities*, MPhil/PhD (CNA)
- 20:19 Newcastle Poly, *Modern languages*, MPhil/PhD (CNA)
- 20:20 N Staffs Poly, *Literature*, MPhil/PhD (CNA)
- 20:21 Oxford, *Oriental studies*, MLitt/DPhil
- 20:22 Poly of Central London, *Languages*, MPhil/PhD
- 20:23 Poly of North London, *Language and literature*, MPhil/PhD (CNA)
- 20:24 Portsmouth Poly, *Historical and literary studies*, MPhil/PhD (CNA)
- 20:25 Strathclyde, *Modern languages*, MA/MSc/MLitt/PhD
- 20:26 Sussex, *Comparative literature*, MPhil/DPhil
- 20:27 Teesside Poly, *Languages and literatures*, MPhil/PhD (CNA)
- 20:28 Trent Poly, *Literature*, MPhil/PhD (CNA)
- 20:29 Trent Poly, *Modern languages*, MPhil/PhD (CNA)
- 20:30 Wales (Aberystwyth), *Romance studies*, MA/PhD
- 20:31 Wales (Swansea), *Romance studies*, MA/PhD
- 20:32 Warwick, *Comparative literature*, MPhil/PhD
- 20:33 Wolverhampton Poly, *Languages and European studies*, MPhil/PhD (CNA)

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 20:34 Birmingham, *Cultural studies*, MA
- 20:35 Bristol, *Modern languages*, MA
- 20:36 Buckingham, *Modern languages*, MA/Diploma

- 20 37 Cambridge, *Oriental studies*, MPhil  
 20 38 East Anglia, *Comparative literature*, MA  
 20 39 East Anglia, *European languages and linguistics*, MA  
 20 40 East Anglia, *European literature*, MA  
 20 41 Edinburgh, *Comparative and general literature*, MSc  
 20 42 Edinburgh, *Medieval languages*, MSc  
 20 43 Essex, *Cross-cultural studies*, MA  
 20 44 Essex, *Sociology of literature*, MA  
 20 45 Essex, *Theory and practice of literary translation*, MA  
 20 46 Leeds, *Anglo-German literary relations*, MA  
 20 47 Leeds, *Bibliography, publishing and textual studies*, MA  
 20 48 Leeds, *Commonwealth literature*, MA  
 20 49 Leeds, *Medieval studies*, MA  
 20 50 London (Birkbeck), *Medieval studies*, MA  
 20 51 London (Birkbeck), *Renaissance studies*, MA  
 20 52 London (Birkbeck), *Romance languages and literatures*, MA  
 20 53 London (Birkbeck), *Romance languages and literatures*, MA  
 20 54 London (Birkbeck), *Romance languages and literatures*, MA  
 20 55 London (Birkbeck), *Romance languages and literatures*, MA  
 20 56 London (Birkbeck), *Romance languages and literatures*, MA  
 20 57 London (Birkbeck), *Romance languages and literatures*, MA  
 20 58 London (Birkbeck), *Romance languages and literatures*, MA  
 20 59 London (Queen Mary), *Romance languages and literatures*, MA  
 20 60 London (SSEES), *Romance languages and literatures*, MA  
 20 61 London (Westfield), *Romance languages and literatures*, MA  
 20 62 Manchester, *Comparative literary studies*, MA  
 20 63 Manchester, *European literature of the Middle Ages*, MA  
 20 64 Oxford, *European literature*, MPhil/MSt  
 20 65 St Andrews, *Comparative literary studies*, MLitt/Diploma  
 20 66 St Andrews, *Comparative literary studies*, MLitt/Diploma  
 20 67 St Andrews, *Comparative literary studies*, MLitt/Diploma  
 20 68 St Andrews, *Comparative literary studies*, MLitt/Diploma  
 20 69 St Andrews, *Comparative literary studies*, MLitt/Diploma  
 20 70 St Andrews, *Comparative literary studies*, MLitt/Diploma

book and periodical production and extensive practical work, *specialised topics* inc censorship law of copyright non printed publishing role of computer assessment of coursework exam dissertation Contact JM Fraser

- 20 71 Sussex, *Comparative literature*, MA  
 20 72 Sussex, *Comparative literature*, MA  
 20 73 Sussex, *Comparative literature*, MA  
 20 74 Sussex, *Comparative literature*, MA  
 20 75 Sussex, *Comparative literature*, MA  
 20 76 Sussex, *Comparative literature*, MA  
 20 77 Sussex, *Comparative literature*, MA

## Certificates and diplomas

- 20 78 Ealing CHE, *Language in the multiracial community* Diploma (CNA)  
 20 79 Essex, *Literature* Diploma  
 20 80 King Alfred s C (Winchester), *Language in education*, Diploma (CNA)  
 20 81 La Sainte Union CHE (Southampton), *Language development and the teaching of reading*, Diploma (Southampton)  
 20 82 Salford, *Marketing and a foreign language* MSc  
 20 83 Watford C, *Publishing* Diploma

# UNIVERSITY OF ESSEX

## Department of Literature

The Department has 23 full-time members of staff with teaching and research interests in English and European literature from the Middle Ages to the present day, United States, Latin American and Russian literatures, and the theory and sociology of literature

### MA courses are available in:

American Poetry, Cross-Cultural Studies, Drama, Latin American Literature, Modern Spanish Poetry, 19th and 20th Century English and US Literature, Sociology of Literature, Theory & Practice of Literary Translation, Women Writing, MA in Native American Studies (jointly with the Art Department) and Postgraduate Diploma in Literature.

**MPhil and PhD degrees:** The Department accepts candidates in any area of literary study for which it has qualified members of staff

Further information from: The Graduate Secretary, Department of Literature, University of Essex, Wivenhoe Park, Colchester, Essex CO4 3SQ, England

# UNIVERSITY OF SOUTHAMPTON

## MPhil/PhD

### Modern languages, literature and linguistics

Supervision available in

**FRENCH** Major interest in modern studies, especially 20th-century French social and political structures, 20th-century literature and 18th-century studies, specific areas of staff interest include 17th-century literature and thought, 18th-century literature and thought, 19th-century novel and society, especially Naturalism, Proust, French linguistics, modern literary theories, contemporary fiction, especially Simenon and Perec

**GERMAN** German and Austrian drama, including Wedekind, Brecht and Horváth, the novels of Fontane, the literature of the Weimar Republic and the World Wars, Modern German fiction, especially Mann, Kafka, Musil and the novel of the FRG and GDR, Freud and Jung, Classical German literature, medieval epic, Marx, Lukacs and the Frankfurt School

There is also a 1 year MA by instruction in Austrian Cultural Studies from the 1880s to the 1930s, focusing on Kraus, Schnitzler, Freud and Hofmannsthal

**LINGUISTICS** Semantics, pragmatics, linguistic theory, philosophy of languages, phonetics, phonology, history of French language, structure of contemporary French, French language-teaching methodology, German sociolinguistics, German for specific purposes, second language learning, English for specific purposes

**SPANISH, PORTUGUESE AND LATIN AMERICAN STUDIES** Golden Age and modern Spanish literature, 19th-century Portuguese literature, Latin American literature, including Brazilian, modern Catalan literature, modern Spanish history, specific areas of staff interest include Quevedo, 17th-century Spanish autobiography, Golden Age *a lo divino* poetry, Galdós, Lorca, Machado, Eça de Queirós, popular and erudite literature in Latin America, post-Revolutionary Cuban literature, the Spanish Socialist Party, the Spanish Civil War

**Further information:** The Chairman, School of Modern Languages, University of Southampton, Highfield, Southampton SO9 5NH

## **UNIVERSITY OF WARWICK**

### **MA in English Literature**

The department of English and Comparative Literary Studies offers an MA programme taking one year of full-time study or two years of part-time. It involves a combination of research and taught courses and permits students to develop and combine interests in various areas of English and American literature. Courses currently taught cover Shakespeare in performance, Renaissance

students follow a course in scholarly method and the theory and practice of criticism. In some circumstances suitably qualified students may elect to take the MA entirely by research. A one-year postgraduate diploma is available as preparation for the MA programme, this is intended for overseas students, or for applicants moving into English studies from some other academic area. After the MA course is completed, the department offers excellent opportunities for the pursuit of a higher degree.

*Further particulars from Graduate Office, Faculty of Arts, University of Warwick, Coventry CV4 7AL*

## 21 Languages and literature: Celtic (including Welsh)

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 21:1** Aberdeen, *Celtic studies*, MLitt/PhD
- 21:2** Belfast, *Celtic language and literature*, MA/PhD
- 21:3** Cambridge, *Anglo-Saxon, Norse and Celtic*, MLitt/PhD
- 21:4** Edinburgh, *Celtic studies*, MLitt/PhD
- 21:5** Glasgow, *Celtic*, MLitt/PhD; supervision available on wide range of topics; p-g students encouraged to take range of taught options in Sc Gaelic, Irish and Welsh; staff research interests inc: hist of lit, lit criticism, textual work (Sc Gaelic and Irish), Ossianic studies, dialect study, linguistics, grammar with sp ref to mod and med periods, research related to archive of 'Historical Dictionary of Scottish Gaelic' (held in Dept of Celtic in slip and machine-readable forms). Contact DS Thomson
- 21:6** Manchester, *Celtic studies*, MPhil/PhD
- 21:7** Oxford, *Celtic*, MLitt/DPhil
- 21:8** Ulster, *European studies and modern languages*, MPhil/DPhil
- 21:9** Wales (Aberystwyth), *Breton and Cornish*, MA/PhD
- 21:10** Wales (Aberystwyth), *Celtic studies*, MA/PhD
- 21:11** Wales (Aberystwyth), *Irish*, MA/PhD
- 21:12** Wales (Aberystwyth), *Welsh language and literature*, MA/PhD
- 21:13** Wales (Bangor), *Celtic studies*, MA/PhD
- 21:14** Wales (Cardiff), *Welsh*, MA/PhD
- 21:15** Wales (Lampeter), *Celtic including Welsh*, MA/PhD
- 21:16** Wales (Swansea), *Welsh language and literature*, MA/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 21:17** Edinburgh, *Celtic studies*, MLitt
- 21:18** Ulster, *Irish language and literature*, MA
- 21:19** Wales (Aberystwyth), *Breton and Cornish*, MA
- 21:20** Wales (Aberystwyth), *Irish*, MA
- 21:21** Wales (Aberystwyth), *Welsh language and literature*, MA
- 21:22** Wales (Bangor), *Modern Welsh literature*, MA
- 21:23** Wales (Bangor), *Welsh*, MA
- 21:24** Wales (Cardiff), *Welsh linguistic studies*, MA/Diploma

### Certificates and diplomas

- 21:25** Oxford, *Celtic studies*, Diploma
- 21:26** West Glamorgan IHE (Swansea), *Intensive Welsh*, Certificate (Swansea)

## 22 Languages and literature: East European and Russian

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

- 22 1 Aberdeen, Russian studies, MLitt/PhD
- 22 2 Bath, Modern languages, MPhil/PhD
- 22 3 Birmingham, Russian language and literature, MA/MLitt/PhD
- 22 4 Bristol, Russian, MLitt/PhD
- 22 5 Cambridge, Modern and medieval languages, MLitt/PhD
- 22 6 Durham, Russian, MA/MLitt/PhD
- 22 7 East Anglia, Russian, MPhil/PhD
- 22 8 Edinburgh, Russian and Slavonic studies, MLitt/PhD
- 22 9 Exeter, Russian, MPhil/PhD
- 22 10 Glasgow, Slavonic studies, MLitt/PhD
- 22 11 Hull, Russian studies, MPhil/PhD
- 22 12 Keele, Russian studies, MA/PhD
- 22 13 Leeds, Russian studies, MPhil/PhD
- 22 14 Liverpool, Russian, MPhil/PhD
- 22 15 London (Queen Mary), Russian, MPhil/PhD
- 22 16 London (University of), Russian, MPhil/PhD
- 22 17 Manchester, Russian, MPhil/PhD
- 22 18 Nottingham, Slavonic studies, MPhil/PhD
- 22 19 Oxford, Russian and other Slavonic languages, MLitt/DPhil
- 22 20 Reading, Russian, MPhil/PhD
- 22 21 St Andrews, Russian, MPhil/PhD
- 22 22 Sheffield, Russian and Slavonic studies, MPhil/PhD
- 22 23 Strathclyde, Modern languages, MA/MSc/MLitt/PhD
- 22 24 Surrey, Linguistic and international studies, MPhil/PhD
- 22 25 Sussex, Russian studies, MPhil/DPhil
- 22 26 Wales (Bangor), Russian, MA/PhD
- 22 27 Wales (Swansea), Russian, MA/PhD

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report/dissertation or thesis is normally a part of these courses.

- 22 28 Birmingham, Russian language and literature, MA
- 22 29 Bristol, Modern languages, MA
- 22 30 East Anglia, Russian, MA
- 22 31 Exeter, Russian, MA
- 22 32 Glasgow, Slavonic languages, MPhil
- 22 33 Hull, Russian and general phonetics, MA
- 22 34 Liverpool, Russian, MA

- 22:35** London (Birkbeck), *Romance languages and literatures*, MA
- 22:36** London (SSEES), *Czech and Slovak*, MA
- 22:37** London (SSEES), *Romance languages and literatures*, MA
- 22:38** London (SSEES), *Russian language and literature*, MA
- 22:39** St Andrews, *Russian*, MLitt
- 22:40** Sheffield, *Russian studies*, MA
- 22:41** Sheffield, *Slavonic studies*, MA

## **Certificates and diplomas**

- 22:42** Glasgow, *Russian language for social scientists*, Diploma
- 22:43** Oxford, *Slavonic studies*, Diploma
- 22:44** Strathclyde, *Russian language*, Diploma
- 22:45** Surrey, *Russian*, Diploma

## 23 Languages and literature: French

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the *Entrance requirements and periods of study* paragraphs in the introductory *Postgraduate studies* section.

- 23 1 Aberdeen, *French studies*, MLitt/PhD
- 23 2 Aston, *Modern languages*, MPhil/PhD
- 23 3 Bath, *Modern languages*, MPhil/PhD
- 23 4 Belfast, *French and romance philology*, MA/PhD
- 23 5 Birmingham, *French language and literature*, MA/MLitt/PhD
- 23 6 Bristol, *French*, MA/MLitt/PhD
- 23 7 Bristol Poly, *French*, MPhil/PhD (CNAA)
- 23 8 Brunel, *Languages and linguistics*, MPhil/PhD
- 23 9 Cambridge, *Modern and medieval languages*, MLitt/PhD
- 23 10 Dundee, *French*, MPhil/PhD
- 23 11 Durham, *French*, MA/MLitt/PhD
- 23 12 East Anglia, *French*, MPhil/PhD
- 23 13 Edinburgh, *French language and literature*, MLitt/PhD
- 23 14 Exeter, *French*, MPhil/PhD
- 23 15 Glasgow, *French*, MLitt/PhD
- 23 16 Hull, *French*, MPhil/PhD
- 23 17 Keele, *French*, MA/PhD
- 23 18 Kent, *French*, MA/PhD
- 23 19 Kingston Poly, *French*, MPhil/PhD (CNAA)
- 23 20 Lancaster, *French studies*, MPhil/PhD. See page 161
- 23 21 Leeds, *French*, MA/PhD

- 23 22 Liverpool, *French*, MA/PhD
- 23 23 Loughborough, *French*, MA/PhD

- 23 24 London (Birkbeck), *French*, MPhil/PhD
- 23 25 London (City), *French*, MA/PhD
- 23 26 London (Imperial College), *French*, MA/PhD
- 23 27 London (Imperial College), *French language and literature*, MA/PhD
- 23 28 London (Imperial College), *French*, MA/PhD
- 23 29 London (UC), *French language and literature*, MPhil/PhD
- 23 30 London (Westfield), *French*, MPhil/PhD



- 23:31 Manchester, *French studies*, MPhil/PhD
- 23:32 Newcastle, *French*, MLitt/PhD
- 23:33 Nottingham, *French studies*, MPhil/PhD
- 23:34 Oxford, *French*, MLitt/DPhil
- 23:35 Portsmouth Poly, *Languages and area studies*, MPhil/PhD
- 23:36 Reading, *French*, MPhil/PhD
- 23:37 St Andrews, *French*, MPhil/PhD
- 23:38 Sheffield, *French*, MPhil/PhD
- 23:39 Southampton, *French*, MPhil/PhD
- 23:40 Stirling, *French*, MLitt/PhD
- 23:41 Strathclyde, *Modern languages*, MA/MSc/MLitt/PhD
- 23:42 Surrey, *Linguistic and international studies*, MPhil/PhD
- 23:43 Sussex, *French studies*, MPhil/DPhil
- 23:44 Ulster, *European studies and modern languages*, MPhil/DPhil
- 23:45 Wales (Aberystwyth), *Romance studies*, MA/PhD
- 23:46 Wales (Bangor), *French and romance studies*, MA/PhD
- 23:47 Wales (Cardiff), *French*, MA/PhD
- 23:48 Wales (Lampeter), *French*, MA/PhD
- 23:49 Wales (Swansea), *Romance studies*, MA/PhD
- 23:50 Warwick, *French studies*, MA/MPhil/PhD
- 23:51 Wolverhampton Poly, *Languages and European studies*, MPhil/PhD (CNA)

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 23:52 Belfast, *French studies*, MA
- 23:53 Bristol, *Contemporary French language*, MA
- 23:54 Bristol, *French drama and theatre history*, MA
- 23:55 Bristol, *Modern languages*, MA
- 23:56 East Anglia, *European language and linguistics*, MA
- 23:57 East Anglia, *French*, MA
- 23:58 East Anglia, *French and the teaching of French*, MA
- 23:59 Edinburgh, *Medieval French language and literature*, MSc
- 23:60 Glasgow, *Contemporary French drama*, MPhil
- 23:61 Glasgow, *French fin-de-siècle literature and art*, MPhil
- 23:62 Hull, *French language and education*, MA
- 23:63 Hull, *Medieval French studies*, MA
- 23:64 Hull, *Modern French literature: poetry, novel and drama*, MA
- 23:65 Hull, *Sixteenth- and seventeenth-century French studies*, MA
- 23:66 Lancaster, *French theatre studies*, MA
- 23:67 Lancaster, *Medieval and renaissance French studies*, MA
- 23:68 Lancaster, *Modern French studies*, MA
- 23:69 Liverpool, *French and history*, MA
- 23:70 Liverpool, *French language and literature*, MA, 1 yr f-t; 2 yrs p-t; *course content*: trans, sp author, sp topic in either French lang or lit, a period of lit or lang; exam, extended essay may replace 1 paper. Contact Dr GS Burgess
- 23:71 Liverpool, *French renaissance literature*, MA
- 23:72 Liverpool, *Medieval studies*, MA
- 23:73 London (Birkbeck), *Romance languages and literatures*, MA
- 23:74 London (KQC), *Romance languages and literatures*, MA
- 23:75 London (Queen Mary), *Romance languages and literatures*, MA
- 23:76 London (RHBC), *French*, MA
- 23:77 London (Westfield), *Romance languages and literatures*, MA

23 93 Christ Church C (Canterbury), *Teaching of modern languages (French)*, Diploma (Kent)  
23 94 Liverpool IHE, *French*, Diploma

School of Modern  
Languages

The specialities of the various departments are listed in the University's *Postgraduate Prospectus*.

**Contact:** Graduate Studies Officer,  
Dept of French Studies The University  
Lancaster LA1 4YW

## 24 Languages and literature: German and Dutch

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 24:1 **Aberdeen**, *German language and literature*, MLitt/PhD
- 24:2 **Aston**, *Modern languages*, MPhil/PhD
- 24:3 **Bath**, *Modern languages*, MPhil/PhD
- 24:4 **Belfast**, *German*, MA/PhD
- 24:5 **Birmingham**, *German studies*, MA/MLitt/PhD
- 24:6 **Bristol**, *German*, MA/MLitt/PhD
- 24:7 **Bristol Poly**, *German*, MPhil/PhD (CNA)
- 24:8 **Brunel**, *Languages and linguistics*, MPhil/PhD
- 24:9 **Cambridge**, *Modern and medieval languages*, MLitt/PhD
- 24:10 **Dundee**, *German*, MPhil/PhD
- 24:11 **Durham**, *German*, MA/MLitt/PhD
- 24:12 **East Anglia**, *German*, MPhil/PhD
- 24:13 **Edinburgh**, *German*, MLitt/PhD
- 24:14 **Exeter**, *German*, MPhil/PhD
- 24:15 **Glasgow**, *German*, MLitt/PhD
- 24:16 **Hull**, *German*, MPhil/PhD; supervision available; research interests inc mod Austrian and German lit, mod German drama, mod novelle, social drama, 18th- and 19th-cent lit, comparative lit esp lit of 1st World War, med romance. Contact Professor EO McInnes
- 24:17 **Hull**, *Modern Dutch studies*, MPhil/PhD
- 24:18 **Keele**, *German*, MA/PhD
- 24:19 **Kent**, *German*, MA/PhD
- 24:20 **Kingston Poly**, *German*, MPhil/PhD (CNA)
- 24:21 **Lancaster**, *German studies*, MPhil/PhD
- 24:22 **Leeds**, *German language and literature*, MPhil/PhD
- 24:23 **Leicester**, *German*, MA/MPhil/PhD
- 24:24 **Liverpool**, *Dutch*, MPhil/PhD
- 24:25 **Liverpool**, *German*, MPhil/PhD
- 24:26 **London (Birkbeck)**, *German*, MPhil/PhD
- 24:27 **London (Goldsmiths')**, *German*, MPhil/PhD
- 24:28 **London (KQC)**, *German*, MPhil/PhD
- 24:29 **London (Queen Mary)**, *German*, MPhil/PhD
- 24:30 **London (RHBC)**, *German*, MPhil/PhD
- 24:31 **London (UC)**, *Dutch*, MPhil/PhD
- 24:32 **London (UC)**, *German*, MPhil/PhD
- 24:33 **London (Westfield)**, *German*, MPhil/PhD
- 24:34 **Manchester**, *German language and literature*, MPhil/PhD
- 24:35 **Newcastle**, *German*, MLitt/PhD
- 24:36 **Nottingham**, *German*, MPhil/PhD
- 24:37 **Oxford**, *German*, MLitt/DPhil
- 24:38 **Reading**, *German*, MPhil/PhD
- 24:39 **St Andrews**, *German*, MLitt/MPhil/PhD
- 24:40 **Sheffield**, *Germanic studies*, MPhil/PhD
- 24:41 **Southampton**, *German*, MPhil/PhD



## 25 Languages and literature: Hispanic studies

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 25:1 Aberdeen, *Spanish studies*, MLitt/PhD
- 25:2 Bath, *Modern languages*, MPhil/PhD
- 25:3 Belfast, *Spanish*, MA/PhD
- 25:4 Birmingham, *Hispanic studies*, MA/MLitt/PhD
- 25:5 Bristol, *Hispanic studies*, MLitt/PhD
- 25:6 Bristol Poly, *Spanish*, MPhil/PhD (CNA)
- 25:7 Cambridge, *Modern and medieval languages*, MLitt/PhD
- 25:8 Durham, *Spanish*, MA/MLitt/PhD
- 25:9 Edinburgh, *Hispanic studies*, MLitt/PhD
- 25:10 Exeter, *Spanish*, MPhil/PhD
- 25:11 Glasgow, *Hispanic studies*, MLitt/PhD
- 25:12 Hull, *Spanish*, MPhil/PhD
- 25:13 Kingston Poly, *Spanish*, MPhil/PhD (CNA)
- 25:14 Leeds, *Spanish and Portuguese languages and literatures*, MPhil/PhD See page 166
- 25:15 Liverpool, *Hispanic studies*, MPhil/PhD
- 25:16 London (Birkbeck), *Spanish*, MPhil/PhD
- 25:17 London (KQC), *Portuguese and Brazilian studies*, MPhil/PhD
- 25:18 London (KQC), *Spanish and Spanish-American studies*, MPhil/PhD; supervision available in following and other fields: med. Golden Age and mod Castilian lit; Spanish-American lit and Spanish music; Spanish lang; Iberian Islamic-Christian and *aljamiado* cultures. Contact Professor JW Sage
- 25:19 London (Queen Mary), *Spanish*, MPhil/PhD
- 25:20 London (UC), *Spanish and Latin American studies*, MPhil/PhD
- 25:21 London (Westfield), *Spanish*, MPhil/PhD
- 25:22 Manchester, *Spanish and Portuguese studies*, MPhil/PhD
- 25:23 Newcastle, *Spanish, Portuguese and Latin American studies*, MLitt/PhD
- 25:24 Nottingham, *Hispanic studies*, MPhil/PhD; supervision available for research; specific staff interests: romanticism, generation of 1898 and Modernismo; mod Spanish poetry; fine art and mod lit; comparative lit (principally French and Spanish in 19th and 20th cents esp in *fin de siècle*; Portuguese; comparative lit; narrative theory, structuralism and lit theory; mod Spanish and Latin American lit (inc Brazil), esp mod Spanish novel and Latin American novel; late med Spanish lit; Golden Age drama. Contact Professor RA Cardwell
- 25:25 Oxford, *Spanish and Portuguese*, MLitt/DPhil
- 25:26 St Andrews, *Spanish*, MPhil/PhD
- 25:27 Sheffield, *Hispanic studies*, MPhil/PhD
- 25:28 Southampton, *Spanish*, MPhil/PhD
- 25:29 Stirling, *Spanish*, MLitt/PhD
- 25:30 Strathclyde, *Modern languages*, MA/MSc/MLitt/PhD
- 25:31 Ulster, *European studies and modern languages*, MPhil/DPhil
- 25:32 Wales (Aberystwyth), *Romance studies*, MA/PhD
- 25:33 Wales (Cardiff), *Hispanic studies*, MA/PhD
- 25:34 Wales (Swansea), *Romance studies*, MA/PhD
- 25:35 Wolverhampton Poly, *Languages and European studies*, MPhil/PhD (CNA)

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 25 36 Bristol, *Modern languages*, MA
- 25 37 Cambridge, *Latin American studies*, MPhil
- 25 38 Essex, *Latin American literature*, MA
- 25 39 Essex, *Modern Spanish poetry*, MA
- 25 40 Exeter, *Spanish*, MA
- 25 41 Glasgow, *Hispanic studies and English*, MPhil
- 25 42 Leeds, *Spanish*, MA See page 166
- 25 43 Liverpool, *Languages and linguistics of Spain*, MA
- 25 44 Liverpool, *Latin American studies*, MA
- 25 45 Liverpool, *Medieval studies*, MA
- 25 46 Liverpool, *Spanish and Portuguese literature*, MA
- 25 47 London (Birkbeck), *Hispanic studies* MA
- 25 48 London (Birkbeck), *Romance languages and literatures* MA
- 25 49 London (KQC), *Hispanic studies*, MA 1 yr f t 2 yrs p t topics offered: med. Golden Age and mod. Castilian lit. Spanish American lit. Spanish lang. etc. Contact Professor JW Sage
- 25 50 " " " " " " " " " " " "
- 25 51 " " " " " " " " " " " "
- 25 52 " " " " " " " " " " " "
- 25 53 " " " " " " " " " " " "
- 25 54 " " " " " " " " " " " "
- 25 55 London (Westfield), *Romance languages and literatures*, MA
- 25 56 Newcastle, *Hispanic drama and film*, MA
- 25 57 St Andrews, *Spanish*, MLitt
- 25 58 Salford, *Advanced language studies*, MA/Diploma
- 25 59 Wales (Aberystwyth), *Romance studies* MA
- 25 60 Wales (Swansea), *Romance studies*, MA

## **HISPANIC STUDIES AT LEEDS UNIVERSITY**

Department of  
Spanish & Portuguese

**MA in Spanish by examination.** 1 year f-t, 2 years p-t. Language, literature and history/geography. Some ten options available including Spanish in an economic and business context; a variety of modern authors from Spain and Spanish America; sex, religion and politics under the Catholic Monarchy; Latin American geography.

**MPhil/PhD by research.** Supervision available on a broad range of topics and authors. The Department is particularly strong in modern Peninsular literature and modern Peninsular history.

Further information from the Head of Dept,  
Department of Spanish and Portuguese,  
University of Leeds, Leeds LS2 9JT

## **Which course?**

See chapter  
headings on  
pages 42 and  
43 for cognate  
subjects

## 26 Languages and literature: Italian

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.*

- 26 1 Aberdeen, *Italian studies*, MLitt/PhD
- 26 2 Bath, *Modern languages*, MPhil/PhD
- 26 3 Belfast, *Italian*, MA/PhD
- 26 4 Birmingham, *Italian language and literature*, MA/MLitt/PhD
- 26 5 Bristol, *Italian*, MLitt/PhD
- 26 6 Cambridge, *Modern and medieval languages*, MLitt/PhD
- 26 7 Edinburgh, *Italian*, MLitt/PhD
- 26 8 Exeter, *Italian*, MPhil/PhD
- 26 9 Glasgow, *Italian*, MLitt/PhD
- 26 10 Hull, *Italian*, MPhil/PhD
- 26 11 Kent, *Italian*, MA/PhD
- 26 12 Lancaster, *Italian studies*, MPhil/PhD
- 26 13 Leeds, *Italian language and literature*, MPhil/PhD
- 26 14 Leicester, *Italian*, MA/MPhil/PhD
- 26 15 Liverpool, *Italian*, MPhil/PhD
- 26 16 London (Birkbeck), *Italian*, MPhil/PhD
- 26 17 London (RHBC), *Italian*, MPhil/PhD
- 26 18 London (UC), *Italian*, MPhil/PhD
- 26 19 Manchester, *Italian studies*, MPhil/PhD
- 26 20 Oxford, *Italian*, MLitt/DPhil
- 26 21 Reading, *Italian studies*, MPhil/PhD
- 26 22 Sheffield, *Hispanic studies*, MPhil/PhD
- 26 23 Southampton, *Italian studies*, MPhil/PhD
- 26 24 " " "
- 26 25 " " "
- 26 26 " " "
- 26 27 Swansea, *Romance studies*, MA/PhD
- 26 28 Warwick, *Italian*, MA/MPhil/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report/dissertation or thesis is normally a part of these courses.*

- 26 29 Bristol, *Modern languages*, MA
- 26 30 Hull, *Italian Renaissance studies*, MA
- 26 31 Hull, *Modern Italian studies*, MA
- 26 32 Liverpool, *Italian renaissance*, MA
- 26 33 Liverpool, *Medieval studies*, MA
- 26 34 London (Birkbeck), *Romance languages and literatures*, MA
- 26 35 London (Westfield), *Romance language and literatures*, MA
- 26 36 Reading, *Italian studies*, MA



26:37 Wales (Aberystwyth), *Romance studies*, MA

26:38 Wales (Cardiff), *Italian*, MA

26:39 Wales (Swansea), *Romance studies*, MA

26:40 Warwick, *Teaching Italian as a foreign language*, MA

## 27 Languages and literature: Scandinavian studies

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section*

- 27 1 Aberdeen, Swedish MLitt/PhD
- 27 2 Cambridge Anglo Saxon Norse and Celtic MLitt/PhD
- 27 3 Cambridge, Modern and medieval languages MLitt/PhD
- 27 4 East Anglia, Scandinavian MPhil/PhD
- 27 5 Hull, Scandinavian studies MPhil/PhD
- 27 6 London (KQC) English MPhil/PhD
- 27 7 London (UC), Scandinavian studies MPhil/PhD
- 27 8 Newcastle, Scandinavian studies MLitt/PhD
- 27 9 Sheffield Germanic studies MA/PhD
- 27 10 Surrey, Linguistic and international studies MPhil/PhD
- 27 11 Wales (Lampeter), Swedish MA/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

- 27 12 East Anglia, Scandinavian MA
- 27 13 " " " "
- 27 14 " " " "
- 27 15 " " " "
- 27 16 " " " "
- 27 17 " " " "
- 27 18 " " " "
- 27 19 Surrey, Translation MA/Diploma
- 27 20 Wales (Lampeter), Swedish MA

# 28 Languages and literature: Semitic studies

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section*

- 28:1 **Cambridge**, *Oriental studies*, MLitt/PhD
- 28:2 **Durham**, *Arabic studies*, MA/MLitt/PhD
- 28:3 **Durham**, *Semitic languages*, MA
- 28:4 **Edinburgh**, *Arabic and Islamic studies*, MLitt/PhD
- 28:5 **Exeter**, *Arabic and Islamic studies*, MPhil/PhD
- 28:6 **Glasgow**, *Arabic literature*, MLitt/PhD
- 28:7 **Leeds**, *Arabic studies*, MPhil/PhD
- 28:8 **Leeds**, *Hebrew language and literature*, MPhil/PhD
- 28:9 **Liverpool**, *Oriental studies*, MPhil/PhD
- 28:10 **London (SOAS)**, *Near and Middle East studies*, MPhil/PhD
- 28:11 **London (UC)**, *Hebrew and Jewish studies*, MPhil/PhD
- 28:12 **Oxford**, *Semitic languages*, MLitt/DPhil
- 28:13 **St Andrews**, *Arabic studies*, MPhil/PhD
- 28:14 **Wales (Bangor)**, *Biblical studies*, MA/PhD

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

- 28:15 **Aberdeen**, *Biblical studies*, MTh
- 28:16 **Durham**, *Semitic studies*, MA
- 28:17 **Leeds**, *Arabic*, MA
- 28:18 **Leeds**, *Hebrew*, MA
- 28:19 **London (Jews')**, *Hebrew and Jewish studies*, MA
- 28:20 **London (Jews')**, *Jewish studies*, MPhil
- 28:21 **St Andrews**, *Arabic studies*, MLitt/Diploma
- 28:22 **Salford**, *Applied linguistics with special reference to the Arab world*, MA, 1 yr f-t (deg or equiv req, also good command of English and Arabic), designed to offer to those already active in lang teaching or who intend to enter field possibility of deepening understanding of applied linguistics and appreciation of problems of Arabic-speaking learner, *course content* gen topics in applied linguistic theory and pra ... nd teaching methodology), opportunity to study such specialist topics as ... in Arab world, contrastive Arabic-English text linguistics, contrastive pragmatics, sociolinguistics of Arab-speaking societies in gen, assessment by extended essays and dissertation. Contact Administrative Officer, Dept of Modern Languages
- 28:23 **Salford**, *Interpretation*, MA, 1 yr f-t (deg or equiv req, also sp qualifying test), designed to meet increasing demand for professional Arabic-English and English-Arabic interpreters, suitable for those working as interpreters at international and regional organisations, and at ministries of foreign affairs and information as well as freelance professional interpreters, *course inc* at-sight trans, intensive lang studies, cultural context of disciplines embracing law, economics, international relations, arts and sciences, regional dialects and terminology, monitoring, simultaneous and consecutive interpretation. Contact Administrative Officer, Dept of Modern Languages
- 28:24 **Salford**, *Translation*, MA, 1 yr f-t (recognised deg req, plus high-level competence in English and Arabic), designed to develop skills in English-Arabic and Arabic-English trans needed in inter-

## Certificates and diplomas

- 28 25 Durham, *Arabic*, Diploma  
 28 26 Poly of Central London, *Arabic/English translation*, Diploma  
 28 27 St Andrews, *Modern Arabic*, Diploma

UNIVERSITY OF SALFORD

### DEPARTMENT OF MODERN LANGUAGES

#### MA IN TEACHING ARABIC AS A SECOND LANGUAGE

One of a range of MA courses in applied Arabic Studies this 2 year programme is designed to give students a high level of fluency both written and oral in English and Arabic while introducing them to the techniques required for teaching Arabic as a second language.

The course has two distinct stages. Year 1 is an intensive language year (which is also available as a Diploma or as a preparatory year for any of the Department's Arabic Studies degrees).

proficiency testing contrastive lexicology second language acquisition theory Arabic/English/Arabic Translation

Candidates should hold a university degree or equivalent and have a reasonable command of both Arabic and English.

Information from The Administrative Officer (P/G)  
 Department of Modern Languages The University of Salford  
 M5 4WT

# Which course?

See chapter  
headings on  
pages 42 and  
43 for cognate  
subjects

## 29 Languages and literature: other

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 29:1 Bath, *Modern languages*, MPhil/PhD
- 29:2 Cambridge, *Chinese studies*, MLitt/PhD
- 29:3 Cambridge, *Indian studies*, MLitt/PhD
- 29:4 Cambridge, *Japanese studies*, MLitt/PhD
- 29:5 Durham, *Chinese studies*, MA/MLitt/PhD
- 29:6 Durham, *Persian studies*, MA/MLitt/PhD
- 29:7 Durham, *Turkish studies*, MA/MLitt/PhD
- 29:8 Edinburgh, *Chinese*, MLitt/PhD
- 29:9 Edinburgh, *Persian studies*, MLitt/PhD
- 29:10 Edinburgh, *Sanskrit*, PhD
- 29:11 Leeds, *Chinese studies*, MPhil/PhD
- 29:12 Leeds, *Japanese*, MPhil/PhD
- 29:13 London (SOAS), *African studies*, MPhil/PhD
- 29:14 London (SOAS), *Classical Indian languages and literatures*, MPhil/PhD
- 29:15 London (SOAS), *Far East studies*, MPhil/PhD
- 29:16 London (SOAS), *Modern Indian languages and literatures*, MPhil/PhD
- 29:17 Oxford, *Chinese*, MLitt/DPhil
- 29:18 Oxford, *Indian and Indo-Iranian*, MLitt/DPhil
- 29:19 Oxford, *Japanese*, MLitt/DPhil
- 29:20 Oxford, *Modern and medieval Greek*, MLitt/DPhil
- 29:21 Sheffield, *Japanese studies*, MPhil/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 29:22 Bath, *Translation and linguistics (Arabic/English)*, MA
- 29:23 Cambridge, *Oriental studies*, MPhil
- 29:24 Cambridge, *Oriental studies*, MPhil
- 29:25 Essex, *Native American studies*, MA
- 29:26 Leeds, *Mongolian studies*, MA
- 29:27 London (SOAS), *Modern Indian languages and literatures*, MA
- 29:28 London (SOAS), *African language*, MA
- 29:29 London (SOAS), *Area studies: Africa*, MA
- 29:30 London (SOAS), *Area studies: South Asia*, MA
- 29:31 London (SOAS), *Classical Indian studies*, MA
- 29:32 London (SOAS), *Old and Middle Iranian*, MPhil
- 29:33 London (SOAS), *Sanskrit*, MPhil
- 29:34 Oxford, *Chinese studies*, MSt
- 29:35 St Andrews, *Amerindian studies*, MPhil



## 30 Law

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 30:1 Aberdeen, Law, LLM/PhD**
- 30:2 Belfast, Law, LLM/PhD**
- 30:3 Birmingham, Jurisprudence, MJur/PhD**
- 30:4 Birmingham, Law, LLM/PhD**
- 30:5 Bristol, Law, LLM/PhD;** supervision available, research interests inc: contract and tort (esp professional negligence, damages, relationship of tort and contract liability); commercial law inc company law; law of property (trusts, wills and succession, conveyances esp conditions of sale, covenants as to title, powers and duties of Chief Land Registrar, social control of land esp planning agreements, Land Compensation Act 1973, harassment and illegal eviction); revenue law (income tax, capital taxes); public law (judicial review of admin action, Ombudsmen, Royal Prerogative, law of arrest, search and seizure, public law remedies, human rights in Europe); international law of the sea; family law (esp law relating to children); press law (with sp ref to contempt of court), conflict of laws (esp Anglo-American comparative aspects, EEC aspects, torts and jurisdiction) Contact David Feldman
- 30:6 Brunel, Law, MPhil/PhD;** supervision available for research, interests inc: public law, welfare law, property law, legal services, comparative criminal law and procedure, police organisation, training and methods; sentencing theory and practice, Juvenile Courts; public law, legal theory, law and social change, social of law, comparative law, law of ethnic minorities (sp ref to Hindu law); family and child law; magistrates' courts; consumer protection and fair trading, supply of goods and services, trade descriptions, small claims, criminal law, evidence and criminal procedure, criminal law, evidence and procedure, commercial and industrial organisation; labour law, legal education, critical legal studies; policing and EC's law Contact Dr R Dhavan
- 30:7 Buckingham, Law, LLM/MPhil/DPhil**
- 30:8 Cambridge, Criminology, MLitt/PhD**
- 30:9 Cambridge, Law, MLitt/PhD**
- 30:10 City of London Poly, Business law, MPhil/PhD (CNA)**
- 30:11 Dorset IHE (Poole), Finance and law, MPhil/PhD (CNA)**
- 30:12 Dundee, Jurisprudence, LLM/PhD**
- 30:13 Dundee, Petroleum law, LLM/PhD**
- 30:14 Dundee, Private law, LLM/PhD**
- 30:15 Dundee, Public law, LLM/PhD**
- 30:16 Durham, Law, BCL/MA/PhD**
- 30:17 East Anglia, Law, LLM/MPhil/PhD;** supervision available for research, staff interests inc: family law, property law, succession, English and Scots property law, taxation; public law, environmental law; industrial law, tort, criminal law, admin law, legal system, commercial law, consumer law; private international law, comparative law; evidence and criminal procedure; criminal justice systems; legal hist, social welfare law and practice; ecclesiastical law. Contact DR Thomas
- 30:18 Edinburgh, Civil law, MPhil/PhD**
- 30:19 Edinburgh, Law, MPhil/PhD**
- 30:20 Edinburgh, Public international law, MPhil/PhD**
- 30:21 Essex, Law, MPhil/PhD**
- 30:22 Exeter, Law, MPhil/PhD**
- 30:23 Exeter, Socio-legal studies, MPhil/PhD**
- 30:24 Glasgow, Law, LLM/PhD**
- 30:25 Huddersfield Poly, Law, MPhil/PhD (CNA)**

- 30 26 Hull, *Law*, LLM/MPhil/PhD  
 30 27 Keele, *Law*, LLM/MA/PhD  
 30 28 Kent, *Law*, MPhil/PhD  
 30 29 Lancashire Poly, *Law*, MPhil/PhD (CNAAB)  
 30 30 Lancaster, *Law*, LLM/PhD  
 30 31 Leeds, *Law*, MA/LLM/PhD  
 30 32 Leicester, *Law*, MPhil/PhD  
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 30 44 Newcastle, *Law*, LLM/PhD  
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 30 48 Nottingham, *Law*, MPhil/PhD  
 30 49 Oxford, *Law*, MLitt/DPhil  
 30 50  
 30 51  
 30 52  
 30 53 Sheffield, *Law*, LLM/MPhil/PhD  
 30 54 Southampton, *Law*, MPhil/PhD See page 179  
 30 55 South Bank Poly, *Law*, MPhil/PhD (CNAAB)  
 30 56 Stirling, *Accountancy and business law*, MSc/PhD  
 30 57 Strathclyde, *Law*, LLM/PhD  
 30 58 Sussex, *Law*, MPhil/DPhil  
 30 59 Trent Poly, *Legal studies*, MPhil/PhD (CNAAB)  
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## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 30:66 Belfast, Law, LLM**  
**30:67 Birmingham, Socio-legal studies, MSocSc**  
**30:68 Bristol, Law, LLM, 1 yr f-t; 2 yrs p-t; specialisation in commercial law possible; course content:** inc 4 of: applied contract law, law of banking and insurance, collective labour relations and law, commercial and consumer law, company law, international contracts, international sales and carriage of goods by sea, monopolies and restrictive trade practices, admin law, law of civil liberties, conflict of laws, conveyancing, criminology, law of damages, law of European communities, evidence, family law, freedom of testation, international law of the sea, legal hist, phil of law, law relating to restitution, revenue law, labour law, Roman law (inc a title of digest), social control of land, succession; or 3 of above topics and dissertation on an approved subj. Contact David Feldman  
**30:69 Brunel, Sociology and law, MA/Diploma**  
**30:70 Cambridge, Criminology, MPhil**  
**30:71 Cambridge, Law, LLM**  
**30:72 City, Law, MA/Diploma**  
**30:73 City, Law and practice, MA/Diploma**  
**30:74 City of London Poly, Business law, MA (CNA)**  
**30:75 Dundee, Resources law, MSc**  
**30:76 Edinburgh, Legal studies, LLM/MSc**  
**30:77 Essex, Law, LLM**  
**30:78 Exeter, European legal studies, LLM**  
**30:79 Exeter, International business legal studies, LLM**  
**30:80 Glasgow, Law, LLM**  
**30:81 Hull, Criminology, MA**  
**30:82 Hull, International law, LLM/Diploma** See page 178  
**30:83 Hull, International law and politics, MA**  
**30:84 Keele, Criminology, MA**  
**30:85 Kent, Law, LLM/Diploma**  
**30:86 Leicester, Welfare law, LLM, 1 yr f-t; 2c yrs p-t; aims to provide qualified or qualifying practising lawyers or those teaching law to social work students with working knowledge and expertise in handling of legal problems of less affluent and less articulate sections of community. Contact Registrar (Higher Degrees)**  
**30:87 London (KQC), Law, LLM**  
**30:88 London (LSE), Law, LLM**  
**30:89 London (LSE), Sea-use law, economics and policy-making, MSc**  
**30:90 London (Queen Mary), Law, LLM**  
**30:91 London (SOAS), Law, LLM**  
**30:92 London (UC), Law, LLM**  
**30:93 Manchester, Jurisprudence, MJur**  
**30:94 Manchester, Philosophy of law, MJur**  
**30:95 Newcastle, Law, LLM/Diploma**  
**30:96 Oxford, Law, BCL**  
**30:97 Reading, Criminal justice, MA**  
**30:98 Sheffield, Socio-legal studies, MA**  
**30:99 Southampton, Law, LLM** See page 179  
**30:100 Strathclyde, Business legal systems, LLM**  
**30:101 Wales (Cardiff), Criminology, MScEcon**  
**30:102 Wales (UWIST), Law, LLM, MSc**  
**30:103 Warwick, Law in development, LLM, 1 yr f-t; for lawyers working in, studying, or wishing to work in local govt in 3rd World; course content:** law and development in theory and practice; urban legal admin; public enterprise law; agriculture, food policy and the law; constitutional law and theory in

the 3rd world dissertation Contact Postgraduate Secretary School of Law  
 30 104 Warwick, *Law in society*, LLM

## Certificates and diplomas

- 30 105 Belfast, *Laws*, Diploma  
 30 106 Birmingham, *Socio-legal studies*, Diploma  
 30 107 Bristol, *English legal studies*, Diploma 1 yr f t, designed for overseas law grads from non-common law jurisdictions who wish to acquaint themselves with main principles of English common law and equity *subs of study* intro to English legal method and insts principles of tort and contract intro to equity and property, and *either* law of business assoc *or* family law *or* another approved topic Contact David Feldman  
 30 108 Cambridge, *International law*, Diploma  
 30 109 Cambridge, *Legal studies*, Diploma  
 30 110 Dundee, *Legal practice*, Diploma  
 30 111 Dundee, *Mineral law*, Diploma  
 30 112 Dundee, *Petroleum law*, Diploma  
 30 113 Edinburgh, *Legal practice*, Diploma  
 30 114 Glasgow, *Legal practice*, Diploma  
 30 115 Glasgow, *Roman law*, Diploma  
 30 116 Hull, *Comparative law*, Diploma  
 0 117 Leeds Poly, *European community law and integration*, Diploma  
 0 118 Liverpool, *International law*, Diploma 1 2 yrs f t (according to quals) (d+g req not necessarily in  
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 0 126 London (UC), *Law*, Diploma  
 0 127 London (UC), *Shipping law*, Diploma  
 0 128 Manchester, *International law*, Diploma  
 0 129 Manchester Poly, *Industrial relations and labour law*, Diploma (CMAA)  
 0 130 Oxford, *Law*, Diploma  
 0 131 Strathclyde, *Legal practice*, Diploma  
 0 132 Ulster, *Administration and law*, Diploma  
 0 133 Wales (Aberystwyth), *Common law*, Diploma  
 0 134 Wales (Aberystwyth), *European law and government*, Diploma  
 0 135 Wales (Aberystwyth), *International law and relations*, Diploma

# **University of Hull**

## **LLM in International Law**

One-year taught course assessed by examination and dissertation

Candidates may specialise in general international law or in international business law.

Options offered include international law, law of the sea, conflict of laws, EEC law, international law of human rights, international economic law, international business law

Postgraduate Prospectus available from:

**Postgraduate Secretary**  
**Faculty of Law**  
**University of Hull**  
**Hull HU6 7RX**

# **UNIVERSITY OF BRISTOL**

## **Postgraduate study in the Faculty of Law**

### **Courses available**

**By advanced study and examination**

- The LLM in Commercial Law
- The LLM in General Legal Studies
- The Diploma in English Legal Studies (this course is designed specifically for overseas law graduates wishing to study the main principles of English common law and equity)

**By research**

- Degree of Doctor of Philosophy (PhD)
- Degree of Master of Laws (LLM)

**Write for further details to:**

*The Dean, Faculty of Law, University of Bristol,  
Wills Memorial Building, Queens Road, Bristol BS8 1RJ.*



**QUEEN MARY COLLEGE  
(University of London)**

**Centre for Commercial Law Studies**

**LLM in Commercial Law**

One year full-time or two-year part time course in commercial law subjects in the University's LLM programme. Options available are in the areas of intellectual property law, banking law, commercial arbitration, competition law, corporate insolvency, insurance, securities regulation and information technology.

**Diploma in Intellectual Property Law**

One-year full time or two-year part-time course providing intensive postgraduate study in intellectual property law.

**Diploma in Media Law**

One year full time or two-year part time course providing a grounding in the various areas of law affecting the media industries.

For prospectus write to: Mrs Nicola Jones, Centre for Commercial Law Studies,  
Queen Mary College, Mile End Road, London E1 4NS

Tel 01-980 4811 ext 3676

**University of Southampton**  
**Postgraduate Legal Studies**

**LLM** One-year instructional course assessed by examination and dissertation. Options specialise in maritime law subjects and international trade, and also include EEC law, human rights, industrial relations and law and the environment.

**PhD and MPhil** Facilities available for research in most legal subjects.

*For prospectus write to*

**Postgraduate Admissions  
Faculty of Law  
The University  
Southampton SO9 5NH.**

# **University of Hull**

## **LLM in International Law**

One-year taught course assessed by examination and dissertation

Candidates may specialise in general international law or in international business law.

Options offered include international law, law of the sea, conflict of laws, EEC law, international law of human rights, international economic law, international business law

Postgraduate Prospectus available from:

**Postgraduate Secretary**  
**Faculty of Law**  
**University of Hull**  
**Hull HU6 7RX**

# **UNIVERSITY OF BRISTOL**

## **Postgraduate study in the Faculty of Law**

### **Courses available**

**By advanced study and examination**

- The LLM in Commercial Law
- The LLM in General Legal Studies
- The Diploma in English Legal Studies (this course is designed specifically for overseas law graduates wishing to study the main principles of English common law and equity)

**By research**

- Degree of Doctor of Philosophy (PhD)
- Degree of Master of Laws (LLM)

Write for further details to:

*The Dean, Faculty of Law, University of Bristol,  
Wills Memorial Building, Queens Road, Bristol BS8 1RJ.*



## **QUEEN MARY COLLEGE (University of London)**

### **Centre for Commercial Law Studies**

#### **LLM in Commercial Law**

One year full time or two-year part time course in commercial law subjects in the University's LLM programme. Options available are in the areas of intellectual property law, banking law, commercial arbitration, competition law, corporate insolvency, insurance, securities regulation and information technology.

#### **Diploma in Intellectual Property Law**

One-year full time or two-year part time course providing intensive postgraduate study in intellectual property law.

#### **Diploma in Media Law**

One-year full time or two-year part time course providing a grounding in the various areas of law affecting the media industries.

For prospectus write to: **Mrs Nicola Jones, Centre for Commercial Law Studies, Queen Mary College, Mile End Road, London E1 4NS**  
**Tel 01-980 4811 ext 3676**

## **University of Southampton**

### **Postgraduate Legal Studies**

**LLM** One year instructional course assessed by examination and dissertation. Options specialise in maritime law subjects and international trade, and also include EEC law, human rights, industrial relations and law and the environment.

**PhD and MPhil** Facilities available for research in most legal subjects.

*For prospectus write to*

**Postgraduate Admissions  
Faculty of Law  
The University  
Southampton SO9 5NH**

# CENTRE FOR MARINE LAW AND POLICY

University of Wales Institute  
of Science and Technology

## MSc and LLM in Marine Law and Policy

One-year taught courses assessed by examination and dissertation.

The MSc course is designed primarily for graduates in Law, Geography, Maritime Studies or related subjects who wish to proceed to further studies to the legal aspects of marine affairs. Options expected to be available in 1986/87 include International Law of the Sea, Advanced International Carriage of Goods by Sea, Marine Insurance, Admiralty Law, Maritime Trade and Transportation Law, Coastal Zone Law, Ports and Harbours Policy : Shipping and Resource Management.

*Further particulars and application forms may be obtained from the Assessor, Academic Registry, UWIST, PO Box 68, Cardiff CF1 3XA.*

## UNIVERSITY OF DUNDEE

### CENTRE FOR PETROLEUM AND MINERAL LAW STUDIES

DIPLOMA IN PETROLEUM LAW  
DIPLOMA IN MINERAL LAW  
LLM IN RESOURCES LAW BY STUDY  
RESEARCH AND EXAMINATION  
RESEARCH DEGREES OF LLM/PhD

The Centre for Petroleum and Mineral Law Studies is a unique teaching and research institution. Since 1977 it has offered the Diploma in Petroleum Law, the only postgraduate qualification in Petroleum Law in the UK, and LLM and PhD degrees, the two latter by research. In addition the Centre now offers a Diploma in Mineral Law, again a unique course, and a new LLM degree in Resources Law which will be capable of completion within 1 calendar year (ie the three academic terms plus the long vacation).

A number of quota awards will be available for UK candidates and in addition for certain UK applicants TOPS awards may be available under the auspices of the Manpower Services Commission.

Candidates should hold either a degree in law or a professional qualification in law.

For further information on courses and admission, to: please write, quoting reference number, to:

Mineral Law  
Dundee  
14HN

## UNIVERSITY OF NOTTINGHAM

### INTERNATIONAL LLM.

One-year full-time  
taught courses :  
and dissertation

Human Rights  
Humanitarian Law  
Environmental  
Topics in  
Sea, Export

Prof





ing place of music in education, and to develop critical awareness of curricular methods and materials esp with regard to current issues and problems, aspects of children's musical development considered in context of recent research finding, phenomena which impinge upon development of abilities, attitudes, personality and motivation; *course inc:* musical development, curriculum studies, social aspects of music development. Contact Miss A McCord, Assistant Registrar & Secretary

- 32:75 Reading, *Musicology*, MMus
- 32:76 Reading, *Performance*, MMus
- 32:77 Roehampton IHE, *Music education*, MA/Diploma
- 32:78 Royal NCM, *Performance*, MusMPerf (Manchester)
- 32:79 Sheffield, *Music*, MMus
- 32:80 Southampton, *Musical composition*, BMus
- 32:81 Surrey, *Music*, MMus
- 32:82 Sussex, *Music*, MA
- 32:83 Wales (Aberystwyth), *Music*, MMus
- 32:84 Wales (Bangor), *Music*, MMus
- 32:85 Wales (Bangor), *Music*, MA
- 32:86 Wales (Cardiff), *Music*, MA
- 32:87 Wales (Cardiff), *Music*, MMus
- 32:88 York, *Music*, MA

## Certificates and diplomas

- 32:89 Brighton Poly, *Music performance*, Diploma
- 32:90 Christ Church C (Canterbury), *Music education for the primary and middle years of schooling*, Diploma (Kent)
- 32:91 Exeter, *Education (music and the arts in education)*, Diploma
- 32:92 London (KQC), *Advanced musical studies*, Certificate
- 32:93 Royal NCM, *Advanced orchestral studies*, Diploma (Manchester)
- 32:94 Royal NCM, *Performance (including composition)*, Diploma (Manchester)
- 32:95 St Andrews, *Church music*, Diploma
- 32:96 Surrey, *Conducting*, Diploma
- 32:97 Surrey, *Musicological skills*, Diploma
- 32:98 Surrey, *Tonmeister studies*, Diploma
- 32:99 Welsh CM & D (Cardiff), *Music*, Advanced Certificate



- 33:44 Ulster, *Philosophy*, MPhil/DPhil
- 33:45 Wales (Aberystwyth), *Philosophy*, MA/MSc/MSc(Econ)/PhD
- 33:46 Wales (Bangor), *Philosophy*, MA/PhD
- 33:47 Wales (Cardiff), *Philosophy*, MA/MScEcon/PhD
- 33:48 Wales (Lampeter), *Philosophy*, MA/PhD, supervision available: *Dept of Classics* classic epistemology, classical moral phil, Greek phil of lit, Greek phil of mind, pre-Socratic phil; *Dept of Phil* aesthetics, epistemology, hist of phil, math linguistics, math logic, moral phil, phil of action, phil of logic, phil of maths, phil of mind, phil of religion, phil of science, political phil, post-classic; and med phil, Freud, Feuerbach, Fichte, Heidegger, Kant, Nietzsche, Schelling, Schopenhauer, Wittgenstein, phil of social science, *Dept of Theology* mod theology, phil theology, phil c religion, Buddhism, Hinduism. Contact Dr DA Cockburn
- 33:49 Wales (Swansea), *Philosophy*, MA/MSc/PhD
- 33:50 Warwick, *Philosophy*, MPhil/PhD
- 33:51 York, *Philosophy*, MPhil/DPhil

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 33:52 Belfast, *Philosophy*, MA
- 33:53 Birmingham, *Philosophy*, MA
- 33:54 Bristol, *Ancient philosophy*, MA
- 33:55 East Anglia, *Mathematical logic*, BPhil/MA
- 33:56 East Anglia, *Philosophy*, BPhil
- 33:57 Edinburgh, *Philosophy*, MSc
- 33:58 Edinburgh, *Philosophy*, MLitt
- 33:59 Essex, *Philosophy*, MA
- 33:60 Exeter, *Moral and social philosophy*, MA
- 33:61 Exeter, *Philosophy*, MA
- 33:62 Glasgow, *Philosophy*, MPhil
- 33:63 Hull, *Philosophy of mind*, MA
- 33:64 Hull, *Philosophy of science*, MSc
- 33:65 Kent, *Philosophy*, MA
- 33:66 Kent, *Philosophy (socialist studies)*, MA
- 33:67 Lancaster, *Philosophy*, MA
- 33:68 Leeds, *Logic and philosophy of language*, MA. See page 189
- 33:69 Leeds, *Philosophy of mind*, MA. See page 189
- 33:70 Leicester, *Philosophy of education*, MA(Ed)
- 33:71 Liverpool, *Philosophy*, MA
- 33:72 London (Birkbeck), *Philosophy*, MA
- 33:73 London (Birkbeck), *Philosophy and psychology of language*, MA
- 33:74 London (Inst Ed), *Philosophy*, MA
- 33:75 London (Inst Ed), *Philosophy of education*, MA
- 33:76 London (Inst Ed), *Psychology of education and philosophy of education*, MA/MSc
- 33:77 London (KQC), *Philosophy*, MA
- 33:78 London (LSE), *Logic and scientific method*, MSc
- 33:79 London (LSE), *Social philosophy*, MSc
- 33:80 Manchester, *Philosophy of law*, MJur
- 33:81 Newcastle Poly, *History of ideas*, MA/Diploma (CNA)
- 33:82 Nottingham, *Philosophy*, MA
- 33:83 Oxford, *Philosophy*, BPhil
- 33:84 St Andrews, *Philosophy*, MLitt/MPhil/Diploma
- 33:85 St Andrews, *Philosophy and psychology*, MLitt/Diploma
- 33:86 Sheffield, *Philosophy*, MA



## 34 Politics and government

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 34:1 **Aberdeen**, *Political economy*, MLitt/PhD
- 34:2 **Aberdeen**, *Politics*, MLitt/PhD
- 34:3 **Bath**, *Political economy*, MPhil/PhD
- 34:4 **Bath**, *Politics*, MPhil/PhD
- 34:5 **Belfast**, *Political science*, MA/MSSc/PhD
- 34:6 **Birmingham**, *Political science and international studies*, MSocSc/MPhil/PhD
- 34:7 **Birmingham Poly**, *Government and economics*, MPhil/PhD (CNAAC)
- 34:8 **Bradford**, *Politics*, MPhil/PhD
- 34:9 **Bristol**, *Politics*, MSc/MPhil/PhD
- 34:10 **Brunel**, *Government*, MPhil/PhD
- 34:11 **Buckingham**, *Politics*, MPhil/DPHil
- 34:12 **Cambridge**, *Economics and politics*, MSc/PhD
- 34:13 **Cambridge**, *Social and political sciences*, MSc/PhD
- 34:14 **City of London Poly**, *Politics and government*, MPhil/PhD (CNAAC)
- 34:15 **Coventry (Lanchester) Poly**, *Politics and history*, MPhil/PhD (CNAAC)
- 34:16 **Dundee**, *Political science and social policy*, MPhil/PhD
- 34:17 **Durham**, *Politics*, MA/MPhil/PhD
- 34:18 **East Anglia**, *Politics including international relations*, MPhil/PhD
- 34:19 **Edinburgh**, *European governmental studies*, MPhil/PhD
- 34:20 **Edinburgh**, *Politics and government*, MPhil/PhD
- 34:21 **Essex**, *Government*, MPhil/PhD
- 34:22 **Exeter**, *Politics*, MPhil/PhD
- 34:23 **Glasgow**, *Politics*, MLitt/PhD
- 34:24 **Huddersfield Poly**, *Politics*, MPhil/PhD (CNAAC)
- 34:25 **Hull**, *Politics*, MPhil/PhD
- 34:26 **Keele**, *Politics*, MA/PhD
- 34:27 **Kent**, *Politics and government*, MPhil/PhD
- 34:28 **Kingston Poly**, *Economics and politics*, MPhil/PhD (CNAAC)
- 34:29 **Lancaster**, *Politics*, MPhil/PhD
- 34:30 **Leeds**, *Politics*, MA/MPhil/PhD
- 34:31 **Leicester**, *Politics*, MPhil/PhD
- 34:32 **Liverpool**, *Political theory and institutions*, MPhil/PhD
- 34:33 **London (Birkbeck)**, *Politics*, MPhil/PhD
- 34:34 **London (LSE)**, *Government*, MPhil/PhD
- 34:35 **London (Queen Mary)**, *Political studies*, MPhil/PhD; supervision available for research, sp

interest in: British politics, public policy, politics and govt of E London, political theory and hist of political thought, politics of minorities, W European politics inc EEC, international relations inc strategic studies; specific staff interests inc: interplay betwn economics and politics at all levels, relationship between theory and practice; mod France and Italy esp mass media; interaction of member states of Warsaw Pact and naval strategy; relationship between European law and policy and national policy on equality; political role of women in contemp societies; political sociol; mod political theory; political and social development of E London, impact of immigration, race relations, labour movement; political thought; health policy in Britain; management of unemployment. Contact David Black



- 34:83 Essex, *Soviet government and politics*, MA
- 34:84 Essex, *United States government and politics*, MA
- 34:85 Essex, *Western European politics*, MA
- 34:86 Exeter, *Politics with special reference to the Middle East*, MA
- 34:87 Glasgow, *Political philosophy*, MPhil
- 34:88 Glasgow, *Scottish government and administration*, MPhil
- 34:89 Hull, *European integration and co-operation*, MA
- 34:90 Hull, *International law and politics*, MA
- 34:91 Hull, *International politics*, MA
- 34:92 Hull, *Modern British politics*, MA
- 34:93 Hull, *Policy processes in industrial societies*, MA
- 34:94 Hull, *Political philosophy*, MA
- 34:95 Keele, *United States history and institutions*, MA
- 34:96 Kent, *Comparative politics and political development*, MA/Diploma
- 34:97 Leeds, *British government*, MA
- 34:98 Leeds, *Political sociology*, MA
- 34:99 Leeds, *Political sociology of development*, MA
- 34:100 London (Birkbeck), *Politics and administration*, MSc See page 193
- 34:101 London (Birkbeck), *Politics with sociology*, MSc See page 193
- 34:102 London (Inst Commonwealth Studies), *Area studies: Commonwealth*, MA
- 34:103 London (Inst Ed), *Political education*, MA
- 34:104 London (LSE), *Comparative government*, MSc
- 34:105 London (LSE), *History of political thought*, MSc
- 34:106 London (LSE), *Political philosophy*, MSc
- 34:107 London (LSE), *Political sociology*, MSc
- 34:108 London (LSE), *Politics and government of Russia*, MSc
- 34:109 London (LSE), *Politics and government of the United Kingdom*, MSc
- 34:110 London (LSE), *Politics and government of Western Europe*, MSc
- 34:111 London (SOAS), *Politics*, MSc
- 34:112 London (SSEES), *Politics and government of Russia*, MSc
- 34:113 Manchester, *Government*, MA(Econ)
- 34:114 Manchester Poly, *Labour politics*, MA (CNAAB)
- 34:115 Middlesex Poly, *Political economy*, MA
- 34:116 Nottingham, *Political economy and political culture: Britain and France*, MA
- 34:117 Oxford, *Politics*, MPhil
- 34:118 Reading, *Politics, patronage and literature 1520-1660*, MA
- 34:119 St Andrews, *Management, economics, politics*, MLitt/MPhil/Diploma
- 34:120 Salford, *Politics and contemporary history*, MA
- 34:121 Sussex, *Social and political thought*, MA
- 34:122 Thames Poly, *Political economy*, MA (CNAAB)
- 34:123 Wales (Swansea), *Political theory and government*, MA
- 34:124 Warwick, *Politics*, MA
- 34:125 York, *Asian politics*, MA
- 34:126 York, *Political philosophy*, MA

## Certificates and diplomas

- 34:127 Essex, *Political science*, Certificate
- 34:128 Kent, *Economics*, Diploma
- 34:129 Lancaster, *Politics*, Diploma
- 34:130 London (LSE), *International and comparative politics*, Diploma
- 34:131 Manchester, *Government*, Diploma
- 34:132 Strathclyde, *Government and politics*, Diploma
- 34:133 Wales (Aberystwyth), *European law and government*, Diploma
- 34:134 Wales (Aberystwyth), *Political science*, Diploma

# University of Hull



## Postgraduate Studies in Politics

The Department of Politics offers 6 MA courses, two Diploma courses, and research supervision over a wide range of subjects, within the Graduate School

- PhD/MPhil supervision — special interests in International, British, and European politics, Third World politics, and political theory
- MA courses — full time or part time, including a research training element
- Diplomas — in Political Analysis & Public Administration

Enquiries about any of these are welcome and should be addressed in the first instance to the Director of the Graduate School Department of Politics, University of Hull, Hull HU6 7RX  
Telephone (0482) 46311 ext 6208/5754

## GRADUATE STUDIES IN POLITICS

University of Essex  
Department of Government

information on the  
sequence

The schemes offered for 1986/87 are

- 1) Political Behaviour
- 2) Political Economy
- 3) Political Theory
- 4) Ideology and Discourse Analysis
- 5) Latin American Politics
- 6) Soviet Politics
- 7) United States Government and Politics
- 8) Western European Politics

The Department welcomes applications for the MPhil and PhD programmes (research training and thesis) from graduates with an MA or an excellent

excellence in  
concerning full time, as well as part time  
application forms from Graduate Secretary  
Department of Government University of Essex  
Colchester CO4 3SQ Essex England

## University of Leeds Department of Politics

The Department of Politics at the University of Leeds has fourteen full time staff and a graduate school which averages between 40 to 50 students a year. Research training is offered to all research students and applications are welcome in the following areas

- British politics and administration
- The politics of Africa especially Southern Africa
- Development theory
- Working class political movements
- 19th & 20th century political theories and doctrines
- Communist politics
- Politics of USA and Canada
- Comparative politics and political sociology

The department also offers three MAs which can be taken on a full time or part time basis. These are MA in political sociology, MA in the political sociology of development, MA in British government

Further information can be obtained from Department of Politics, Leeds University, Leeds LS2 9JT.

## BIRKBECK COLLEGE

University of London

### DEPARTMENT OF POLITICS & SOCIOLOGY

#### MASTERS DEGREES IN POLITICS & SOCIOLOGY, and POLITICS & ADMINISTRATION

One year full time two years part time. All formal teaching takes place in the evenings. Normally applicants will have a good first degree in a relevant subject or subjects.

#### MSc Politics & Sociology

Compulsory courses in Political Theory and Political Sociology plus two options

#### MSc Politics & Administration

Compulsory courses in Modern British Politics and Policy and Administration plus two options

Options include American Politics and Society, Western European Government, Society and Politics in the Third World, Communist Theory and its Institutional Setting, Politics and Social Policy, Parliamentary Studies, Religion, Culture and Politics, War in Modern Society

The Department also offers supervision for RESEARCH at MPhil and PhD level. Further details from the Department

Applications as early in the year as possible to Admissions Officer, Department of Politics & Sociology, Birkbeck College, Malet Street, London WC1E 7HX. Tel. 01-631 6542



## 35 Psychology

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 35:1 Aberdeen, Psychology, MLitt/MSc/PhD;** supervision available, exptl work in progress on ageing and pre-senile dementia; theoretical and practical aspects of face memory; witness testimony; problem solving and reasoning (inc cross-cultural aspects); biofeedback, person perception, memory and psychol of lang; work also in progress on neurophysiol of visual learning, emotion; human ethology, imprinting and effects on behaviour of early experience; psychopharmacology; theoretical interests inc problems in hist and phil of psychol, hist of ideas about childhood and contemp theories of person; phenomenology; emotional disturbance in children; facilities for research inc lab space and technical and clerical support; panels of adult volunteer subjs, connections with local schools and hospitals, animal lab housing rats; microcomputers, minicomputers, access to Univ's installation. **Contact** Dr PR Kinnear
- 35:2 Belfast, Psychology, MSc/PhD**
- 35:3 Birmingham, Psychology, MSc/PhD**
- 35:4 Bolton IHE, Psychology, MPhil/PhD (CNA)**
- 35:5 Bradford, Interdisciplinary human studies, MPhil/PhD**
- 35:6 Bradford, Psychology, MPhil/PhD**
- 35:7 Bradford, Social psychology, MPhil/PhD**
- 35:8 Bristol, Psychology, MSc/PhD**
- 35:9 Brunel, Human learning, MPhil/PhD;** supervision available for research, current interests in study of human learning, inc: human learning in its natural habitats, techniques for development of theory and methodology for learning conversations, development of materials for training of trainers; application of personal construct psychol and conversational repertory grid technology for human learning; adv courses and materials on learning-to-learn methods for teachers, trainers and students; self-organised learning for man-management, repertory grid computer-aided methods for quality control appraisal and selection; open-learning techniques for distance teaching; computer-aided reading-to-learn and CAL programs for learning of foreign langs. **Contact** Dr LF Thomas
- 35:10 Brunel, Human sciences, MPhil/PhD**
- 35:11 Cambridge, Experimental psychology, MSc/PhD**
- 35:12 City, Psychology, MPhil/PhD**
- 35:13 City of London Poly, Psychology, MPhil/PhD**
- 35:14 Cranfield, Applied psychology, MSc/PhD**
- 35:15 Dundee, Psychology, MPhil/PhD**
- 35:16 Durham, Psychology, MA/MPhil/MSc/PhD**
- 35:17 Edinburgh, Psychology, MPhil/PhD**
- 35:18 Exeter, Psychology, MPhil/PhD**
- 35:19 Glasgow, Psychology, MLitt/MSc/PhD;** opportunities for p-g study and research in: human exptl, animal, social, developmental and educational psychol; sp interests: psychophysiol, perception, physiol psychol, colour vision and colour blindness, semantic memory, understanding written texts and dialogue, perceptual development in infancy, gerontology, exptl social psychol, social representations, cross-cultural studies; hist of psychol. **Contact** Simon Garrod
- 35:20 Hatfield Poly, Psychology, MPhil/PhD (CNA)**
- 35:21 Huddersfield Poly, Behavioural sciences, MPhil/PhD (CNA)**
- 35:22 Hull, Psychology, MPhil/MSc/PhD;** supervision available in all research fields; exptl and social psychol, position senses, perceptuo-motor skills and motor control, psychol of thinking, social facilitation; educational and occupational psychol, cognitive development, discontinuities in

psychophysiol behavioural pharmacology psychopharmacology of alcohol Parkinson's disease  
normal and abnormal ageing dementia behaviour therapy diagnostic questionnaire technology  
Contact Dr DF Sewell

35 23 Keele, *Communication and neuroscience*, MSc/PhD

35 24 Keele, *Psychology*, MA/PhD

35 25 Kent, *Social psychology*, MPhil/PhD

35 26 Lancaster, *Behaviour in organisations*, MPhil/PhD

35 27 Lancaster, *Psychology*, MPhil/PhD supervision available research interests in following areas  
social psychol, neuropsychol developmental psychol personality cognitive psychol math

personal attraction television production techniques social psychol non verbal behaviour gp  
processes cognitive and perceptual development in infants and young children development of  
concepts of objects and space acquisition of spatial diectic terms psychol of lang and memory esp

cognitive development intellectual and physiol development Contact Dr N Johnson

35 28 Leeds, *Psychology*, MSc/MPhil/PhD supervision available areas of research specialisation

35 29 Leicester, *Psychology*, MSc/MPhil/PhD

35 30 Liverpool, *Psychology*, MA/MSc/MPhil/PhD

35 31 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 32 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 33 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 34 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 35 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 36 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

ate Adviser)

35 37 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 38 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 39 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 40 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 41 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 42 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 43 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 44 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

35 45 London (Birkbeck), *Psychology*, MSc/MPhil/PhD

CNAAC)

- 35:46 Plymouth Poly, *Psychology*, MPhil/PhD (CNA),** supervision available for research, specialist facilities for work in animal behaviour, cognition, developmental psychol, physiol psychophysiol, social psychol. Contact: Academic Registrar
- 35:47 Poly of Central London, *Neurobiology and psychology*, MPhil/PhD (CNA)**
- 35:48 Poly of Wales, *Behavioural and communication studies*, MPhil/PhD (CNA)**
- 35:49 Reading, *Psychology*, MPhil/PhD**
- 35:50 St Andrews, *Psychology*, MSc/PhD**
- 35:51 Sheffield, *Applied psychology*, MPhil/PhD**
- 35:52 Sheffield, *Psychology*, MPhil/MSc/PhD;** supervision available, principal research interests in computational, psychophysical and neurophysical mechanisms of visual perception in humans and animals inc clinical applications; development of skills in children inc psychophysiol of motor control and motor problems of handicapped; development of pre-school children inc social and cognitive development; play and child ethology; psychobiol inc neurochem correlates of behaviour; genetics of behaviour; functions of dopamine systems; computer simulations in psychology theory; CAL; psychol factors in management of diabetes mellitus; geog and locational skills in young children; interpersonal communication and non-verbal behaviour; organisational psychol unemployment and mental health. Contact Dr Christopher Spencer
- 35:53 Southampton, *Psychology*, MPhil/PhD;** supervision available, staff interests inc: picture perception, pitch recognition, hist and theory; cognitive science, human neuropsychol, expert system microcomputers in the classroom; ecc, attention and individual differences, social-psychol processes in family; cognitive processes in production of speech; ethogenic approach to social interaction, leisure, football-related disorders; psychol and health; social and cognitive development in young children, sign lang with retarded children; cognitive loss in human ageing, pain; memory for stories in children; behaviour modification, learned helplessness; development of problem-centred methodology in practice of educational psychol; psychopathy, role of specific learning defects in persistent criminality, strategies in treatment of offenders; social psychol of aggression, beliefs and values related to violence, social influence processes, multivariate research methods; psych influences on cardiovascular disorders; motion sickness. Contact Dr Roger Ingham
- 35:54 Stirling, *Psychology*, MSc/PhD**
- 35:55 Strathclyde, *Psychology*, MSc/PhD**
- 35:56 Surrey, *Psychology*, MPhil/PhD;** supervision available, research interests in following areas environmental psychol, clinical and health psychol, development psychol, social psychol, cognitive psychol (ergonomics). Contact Dr H McGurk
- 35:57 Sussex, *Cognitive studies*, MPhil/DPhil**
- 35:58 Sussex, *Experimental psychology*, MPhil/DPhil;** research training available in: animal learning audition and speech, cognitive psychol, computational models of mental processes and behaviour developmental psychol, human skilled performance, memory and learning, physiol psychol psycholinguistics, thinking and problem solving, vision; *research interests:* cognitive development in children, meaning and inference, speech perception and recognition, use of intonation in English, comprehension of speech, perception of music, comprehension of text, human visual motion perception, mechanisms of visual perception, perception as unconscious inference, model of lexical access and pronunciation, org amnesia, learning difficulties in blind, human performance, control of food intake, hormones and behaviour, animal learning, human conditioning, brain stem coding of speech. Contact Dr RA Boakes
- 35:59 Sussex, *Psychology*, MPhil/DPhil**
- 35:60 Ulster, *Psychology*, MPhil/DPhil**
- 35:61 Wales (Bangor), *Psychology*, MA/MSc/PhD;** supervision available, staff research interests inc dyslexia and ability to process symbolic material, comparative studies of animal behaviour information processing in reading with sp ref to dyslexia, bilingualism and reading, social consequences of dyslexia, effects of attention and laterality on speech perception and production, human and animal operant behaviour, application of learning principles to clinical problems, role of speech in regulation of behaviour; lab with on-line computer, eqpt for study of operant behaviour of humans and animals. Contact Professor TR Miles
- 35:62 Wales (Cardiff), *Psychology*, MSc/PhD**
- 35:63 Wales (Swansea), *Psychology*, MA/MSc/MSc(Econ)/PhD**
- 35:64 Wales (UWIST), *Applied psychology*, MSc/PhD**
- 35:65 Warwick, *Psychology*, MPhil/PhD;** supervision available, research interests: *chemoreception:* effects of odours on attitudes, ageing in olfactory system; *child development:* fantasy play and co-operative activity, handicapped children lang development; *psychotherapy:* marital therapy,

in schizophrenia *social psychol*  
Contact Dr C Van Toller

- 5 66 *Psychology*, MPhil/DPhil research degrees supervised in areas of staff interest: attention and skilled performance; cognitive and perceptual processes in reading; man-machine interaction; social development; reading difficulties; child development; learning disabilities; memory; intelligence; visual perception; mechanisms underlying motion perception; exptl abnormal psychol; training in stat and computer usage. Contact Professor Peter Venables

intelligence; visual perception; mechanisms underlying motion perception; exptl abnormal psychol; training in stat and computer usage. Contact Professor Peter Venables

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 70 Belfast, *Abnormal psychology*, MSc  
71 Belfast, *Developmental and educational psychology*, MSc  
72 Belfast, *Psychology*, MSc  
73 Belfast, *Psychology*, MSc  
74 Belfast, *Psychology*, MSc  
75 Belfast, *Psychology*, MSc  
76 Belfast, *Psychology*, MSc  
77 Belfast, *Psychology*, MSc  
78 Edinburgh, *Educational psychology*, MSc/Diploma  
79 Exeter, *Educational psychology*, MEd  
80 Glasgow, *Educational psychology and child guidance*, MAppSci/Diploma  
81 Hatfield Poly, *Occupational psychology*, MSc (CNAAB)  
82 Huddersfield Poly, *Analysis of decision processes*, MSc (CNAAB)  
83 Huddersfield Poly, *Psychology*, MSc  
84 Keele, *Psychology of mental handicap*, MA  
85 Keele, *Psychology of mental handicap*, MA  
86 Keele, *Psychology of mental handicap*, MA  
87 Keele, *Psychology of mental handicap*, MA  
88 Keele, *Psychology of mental handicap*, MA  
89 Keele, *Psychology of mental handicap*, MA  
90 Keele, *Psychology of mental handicap*, MA  
91 Keele, *Psychology of mental handicap*, MA  
92 Keele, *Psychology of mental handicap*, MA  
93 Keele, *Psychology of mental handicap*, MA

- 35:94 London (Inst Ed), *Child development with primary education*, MA
- 35:95 London (Inst Ed), *Educational psychology*, MA/MSc
- 35:96 London (Inst Ed), *Educational statistics and child development*, MA/MSc
- 35:97 London (Inst Ed), *Educational statistics and psychology of education*, MA/MSc
- 35:98 London (Inst Ed), *Psychology and education of children with special needs*, MA/MSc
- 35:99 London (Inst Ed), *Psychology of education*, MA/MSc
- 35:100 London (Inst Ed), *Psychology of education and philosophy of education*, MA
- 35:101 London (LSE), *Social psychology*, MSc
- 35:102 London (UC), *Educational psychology*, MSc
- 35:103 Manchester, *Educational psychology*, MSc
- 35:104 Manchester (UMIST), *Organisational psychology*, MSc
- 35:105 Newcastle, *Educational psychology*, MSc
- 35:106 NE London Poly, *Educational psychology*, MSc (CNAAB)
- 35:107 NE London Poly, *Occupational and organisational psychology*, MSc (CNAAB)
- 35:108 Nottingham, *Child psychology*, MA/MSc
- 35:109 Reading, *Research methods in psychology*, MSc/Diploma
- 35:110 Roehampton IHE, *Psychological counselling*, MSc (Surrey)
- 35:111 St Andrews, *Philosophy and psychology*, MLitt/Diploma
- 35:112 Salford, *Applied psychology*, MSc
- 35:113 Sheffield, *Educational psychology*, MSc
- 35:114 Sheffield, *Occupational psychology*, MA
- 35:115 Southampton, *Educational psychology*, MSc(SocSc)
- 35:116 Stirling, *Psychology*, MSc
- 35:117 Strathclyde, *Educational psychology*, MSc
- 35:118 Strathclyde, *Research methods in developmental and social psychology*, MSc
- 35:119 Surrey, *Environmental psychology*, MSc, 1c yr f-t; concerned with interface between physical surroundings and people who use and create them; training for employment in variety of situations (eg local and central govt, architecture and design firms), also preparation for research for higher deg; *course content*: research methods, areas of application (architectural form and function, building science, macroscale issues), design decision making (psychol of design, professional practice, decision making); assessment of coursework, exam and dissertation. Contact Professor D Canter
- 35:120 Sussex, *Experimental psychology*, MSc, 1 yr f-t; intended primarily for grads in other disciplines; based mainly on coursework, equips students to proceed to research deg or other postgraduate training in psychol; recognised by BPS; *course content*: intro to psychol, animal psychol, perception, lang and memory, physiol psychol or biol bases of behaviour, AI or learning or speech hearing or cognitive development; exam, 2 short dissertations. Contact Dr RA Boakes
- 35:121 Wales (Bangor), *Education in the field of dyslexia*, MEd
- 35:122 Wales (Swansea), *Educational psychology*, MEd
- 35:123 Wales (UWIST), *Applied psychology*, MSc See page 199
- 35:124 Warwick, *Cognition, computing and psychology*, MSc, 1 yr f-t; cognitive science course with interdisciplinary grounding and intake from psychol and computer science; *contains courses* non-numeric programming (LISP and PROLOG); knowledge eng; lang; man-machine interaction; computers in education; cognitive science, methodology; artificial intelligence; assessed exams, essays, practical reports and major project report/dissertation. Contact Dr JR Thom
- 35:125 Wolverhampton Poly, *Psychology*, MSc/Diploma (CNAAB)

## Certificates and diplomas

- 5 126 *U.S. Psychology Diploma*  
 5 127 *L. ...*  
 5 128 *...*  
 5 129 *...*  
 5 130 *Surrey, Psychology, Diploma 1 yr f t, prelim course for entry to MSc training in research design*

McGurk

- 5 131 *Wales (UWIST), Psychology, Diploma*

### DEPARTMENT OF APPLIED PSYCHOLOGY

### UNIVERSITY OF WALES INSTITUTE OF SCIENCE AND TECHNOLOGY

**MSc in Applied Psychology** This course is designed to develop specialist knowledge to a level at which successful candidates can be considered fully competent to exercise their skills in a formal professional capacity. An applicant who has studied relevant topics in applied psychology may complete the course in 12 months; others are required to complete a foundation year and are registered for 24 months. There are four options: ergonomics, occupational psychology, social psychology and training and instruction.

**University of Wales Diploma in Psychology** The course is designed to further the psychological education of graduates who either did not achieve an honours level in a psychology degree or who read a combined subject degree course in which psychology was a main subject. The Diploma, together with a first degree, provides a qualification equivalent to an honours degree in psychology and meets the requirements of the British Psychological Society regarding eligibility for Graduate Membership of the Society. The course consists of three terms of full-time academic study at UWIST. A project is undertaken and a report of the project must be submitted by 30 April preceding the written examination. Applicants must hold a degree in which psychology has been taken as a main subject and which has been awarded by a British university or by the Council for National Academic Awards, or by some other university approved by UWIST.

Enquiries: The Academic Registrar, UWIST, PO Box 68, Aberconway Building, Cardiff CF1 3EU

## BRUNEL

The University of West London

### DEPARTMENT OF HUMAN SCIENCES

#### *Taught courses*

MA in Industrial Relations (part time)

MA in Socio-Legal Studies (full time and part time)

MSc in Intelligent Systems (full time and part time)

*MPhil/PhD – taught plus research or research only*

The department offers supervision in a variety of areas within Psychology, Sociology and Social Anthropology and also in Communication, and Science and Technology Studies.

*For further details write to*

**The Secretary**

**Department of Human Sciences**

**Brunel University**

**Uxbridge**

**Middlesex**

**UB8 3PH**

## 36 Public administration

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 36:1 Aston, *Management*, MPhil/PhD
- 36:2 Bath, *Public administration*, MPhil/PhD
- 36:3 Birmingham, *Health services management*, MSocSc/MPhil/PhD
- 36:4 Birmingham, *Local government studies*, MSocSc/MPhil/PhD
- 36:5 Birmingham Poly, *Government and economics*, MPhil/PhD (CNA)
- 36:6 Bristol, *Urban studies*, MPhil/PhD
- 36:7 Kent, *Health services administration*, MPhil/PhD
- 36:8 Leeds, *Social policy and health services studies*, MPhil/PhD
- 36:9 Leeds Poly, *Health education*, MPhil/PhD (CNA)
- 36:10 Leicester Poly, *Applied social sciences and public administration*, MPhil/PhD (CNA)
- 36:11 London (LSE), *Public administration*, MPhil/PhD
- 36:12 Newcastle Poly, *Health studies*, MPhil/PhD (CNA)
- 36:13 Oxford, *Transport studies*, MPhil/DPhil
- 36:14 Sheffield City Poly, *Health studies*, MPhil/PhD (CNA)
- 36:15 Sheffield City Poly, *Public sector administration*, MPhil/PhD (CNA)
- 36:16 Southampton, *Politics*, MPhil/PhD
- 36:17 Strathclyde, *Operational research*, MSc/PhD
- 36:18 Strathclyde, *Public policy*, MSc/PhD
- 36:19 Trent Poly, *Economics and public administration*, MPhil/PhD (CNA)
- 36:20 Ulster, *Business and management*, MPhil/DPhil
- 36:21 York, *Politics*, MPhil/DPhil

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

- 36:22 Aston, *Public sector management*, MSc/Diploma
- 36:23 Bath, *Public policy*, MSc
- 36:24 Birmingham, *Local government and health service studies*, MSocSc
- 36:25 Bristol, *Public policy studies*, MPP
- 36:26 Brunel, *Public and social administration*, MA, 1 yr f-t, 2 yrs p-t; course inc research methods, analysis of social policy and admin, social and political thought; specialisation in 1 of community and race relations, educational policy, health service policy, hist of social policy, housing policy, personal social services policy, social security and voluntary sector, local government studies; students undertake short dissertation which allows them to develop their own interests (ESRC quota places and DISS studentships available). Contact Mrs SA Harris
- 36:27 Buckingham, *Public sector studies*, MSc/Diploma
- 36:28 College of Librarianship (Wales), *Library and information services for health care*, MLib (Wales)
- 36:29 Glasgow, *Public health*, MPH
- 36:30 Hull, *Health administration and research*, MSc/Diploma
- 36:31 Kent, *Public policy studies*, MA/Diploma
- 36:32 Leeds, *Health services studies*, MA See page 202

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36 43 Salford, *Public sector economics*, MSc/Diploma  
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36 49 Ulster, *Policy analysis*, MSc  
36 50 Ulster, *Public administration*, MPA  
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36 55 York, *Health economics*, MSc/Diploma

### Certificates and diplomas

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- 36:75 **Sunderland Poly, Management studies**, DMS (CNAAB)  
36:76 **Thames Poly, Management studies (health services)**, DMS (CNAAB)  
36:77 **Ulster, Public administration**, Diploma  
36:78 **Warwick, Public administration and policy analysis**, Diploma

## Leeds University

### MA: Health Services Studies

The programme offers two alternative areas of specialisation -- Health Services Administration and Health Planning -- for those already engaged in health related careers as practitioners, teachers or researchers, and for graduates in one of the social and behavioural sciences, medicine, dentistry, nursing or a related degree contemplating such careers. It consists of a common core of studies in social policy and epidemiology, a course on the theories and practice of administration or planning plus an elective subject selected from a range of options and a dissertation of 15 000 words. Multi-disciplinary in nature, the course is designed to generate a deeper understanding of health and the services and conditions which will best promote it. These broad objectives are pursued mainly through the application of social scientific analysis to current issues in the organisation and delivery of health care and in critical review of these practices for future policy. More specifically there is a sustained concern with effective organisational frameworks for the provision of health services and practical ways in which these might best be planned and administered. The course lasts one year full time or two years part time.

*Further information from: Tom Rathwell, Course Director, Nuffield Centre for Health Services Studies, The Department of Social Policy and Health Services Studies, The University of Leeds, Clarendon Road, Leeds LS2 9PL.*

## University of Liverpool

### Institute of Public Administration and Management (LIPAM)

**MPA: PUBLIC ADMINISTRATION**  
2 years/1 year full-time.

Courses include: financial management, development planning, policy making, multinationals, organisational design, personnel management; continuous assessment, exams and dissertation.

*DipAdminStudies* and *PhD* also available:

#### Further information:

The Director  
LIPAM  
University of Liverpool  
PO Box 147  
Liverpool L69 3BX

## 37 Regional studies: Africa

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory Postgraduate studies' section*

37.1 Aberdeen, African studies, MLitt/PhD

37.2 Birmingham, West African studies, MA/MLitt/PhD

37.3 Birmingham, West African studies, MA/MLitt/PhD

37.4 Birmingham, West African studies, MA/MLitt/PhD

37.5 Birmingham, West African studies, MA/MLitt/PhD

37.6 Birmingham, West African studies, MA/MLitt/PhD

37.7 Oxford, African studies, MLitt/DPhil

37.8 Sussex, African studies, MPhil/DPhil

37.9 York, Southern African studies, MPhil/DPhil, supervision available, current research interests inc 19th and 20th cent Mozambique, Malawi, Zambia, Zimbabwe, company and colonial rule and African oral poetry, social anthropology migration and migrant labour, development and social change in C and S Africa, women and family, 19th and 20th cent African hist, W and S Africa esp Imperial rule and local response, development of nationalist movements in sub Saharan Africa, relations betwn USA and S Africa, Zimbabwe, prospects for industrialisation in S Africa with sp ref to transnational corporations Contact Landeg White

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

37.10 Birmingham, West African studies, MA

37.11 Birmingham, West African studies, MSocSc

37.12 Birmingham, West African studies, MSocSc

37.13 Birmingham, West African studies, MSocSc

37.14 Birmingham, West African studies, MSocSc

37.15 Birmingham, West African studies, MSocSc

37.16 Birmingham, West African studies, MSocSc

37.17 Birmingham, West African studies, MSocSc

37.18 Birmingham, West African studies, MSocSc

## 38 Regional studies: America

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 38:1 Cambridge, *Latin-American studies*, MLitt/PhD
- 38:2 Exeter, *American studies*, MPhil/PhD
- 38:3 Glasgow, *Latin American studies*, MLitt/PhD
- 38:4 Hull, *American studies*, MPhil/PhD
- 38:5 Keele, *American studies*, MA/PhD
- 38:6 Leicester, *American studies*, MA/MPhil/PhD
- 38:7 Liverpool, *Latin American studies*, MPhil/PhD
- 38:8 London (KQC), *Spanish and Spanish-American studies*, MPhil/PhD
- 38:9 Manchester, *American studies*, MPhil/PhD
- 38:10 Newcastle, *Latin American studies*, MLitt/PhD
- 38:11 Nottingham, *American studies*, MPhil/PhD
- 38:12 Oxford, *Latin American studies*, MLitt/DPhil
- 38:13 St Andrews, *Spanish*, MPhil/PhD
- 38:14 Sussex, *American studies*, MPhil/DPhil
- 38:15 Wales (Aberystwyth), *American studies*, MA/PhD
- 38:16 Warwick, *Caribbean studies*, MPhil/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 38:17 Cambridge, *Latin-American studies*, MPhil, 1 yr f-t; *course content*: specialisation in 1 of following areas of study in Latin American context: economics, rural sociol, hist, social anthropology, mod lit, urban sociol, ethnohistory, archaeology; choice of 3 papers from following (2 papers from 1 gp plus 1 paper from another gp): agrarian sociol of Andean zone, topic in Andean agrarian sociol, social anthrop of Andean zone and upper Amazon, hist of Mexico, topic in Mexican hist; Spanish American Lit, two Spanish American authors, arch and ethnohist of Mesoamerica and Andean zone, topic in arch and ethnohist of either Mesoamerica or Andean zone; urban sociol of Latin America, issues in urban planning of Latin America, politics and sociol of econ development of Latin America, economics of modern Latin America, topic in econ development of Latin America; assessment by thesis, written papers and oral exam or in sp cases by longer thesis and oral exam, updated brochure available. Contact Dr DA Brading, Director
- 38:18 East Anglia, *American studies*, MA
- 38:19 Edinburgh, *North American studies (United States and/or Canada)*, MPhil
- 38:20 Essex, *Latin American government and politics*, MA
- 38:21 Essex, *Native American studies*, MA
- 38:22 Essex, *United States government and politics*, MA
- 38:23 Exeter, *American studies*, MA, 1c yr f-t, 2 yrs p-t, *course content*: texts and topics in American studies; 2 options from range in hist, geog, politics, econ hist, film, lit; dissertation. Contact Dr J Smith
- 38:24 Glasgow, *Latin American studies*, MPhil

- 38 25 Keele, *United States history and institutions*, MA  
 38 26 Liverpool, *Latin American studies*, MA  
 38 27 *Latin American studies*, MA  
 38 28 *Latin American studies*, MA  
 38 29 *Latin American studies*, MA  
 38 30 *Latin American studies*, MA  
 38 31 *Latin American studies*, MA  
 38 32 *Latin American studies*, MA  
 38 33 *Latin American studies*, MA  
 38 34 *Latin American studies*, MA  
 38 35 *Latin American studies*, MA  
 38 36 Nottingham, *American studies*, MA  
 38 37 Oxford, *Latin American studies*, MPhil  
 38 38 Oxford, *Public policy in Latin America*, MSc  
 38 39 St Andrews, *Amerindian studies*, MPhil  
 38 40 Sussex, *American studies*, MA

### Certificates and diplomas

- 38 41 St Andrews, *Quechua studies*, Diploma

## 39 Regional studies: Asia

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 39:1 Cambridge, Divinity, MLitt/PhD
- 39:2 Durham, Oriental studies, MA/MLitt/PhD
- 39:3 Hull, South East Asian studies, MPhil/PhD
- 39:4 Kent, South East Asian studies, MPhil/PhD
- 39:5 London (SOAS), Classical Indian studies, MPhil/PhD
- 39:6 London (SOAS), Far East studies, MPhil/PhD
- 39:7 London (SOAS), Modern South Asian studies, MPhil/PhD
- 39:8 London (SOAS), South East Asia and the islands, MPhil/PhD
- 39:9 Oxford, Oriental studies, MLitt/PhD
- 39:10 Sheffield, Japanese studies, MPhil/PhD
- 39:11 Sussex, South Asian studies, MPhil/DPhil

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 39:12 Hull, South East Asian studies, MA/Diploma
- 39:13 Kent, South East Asian studies, MA/Diploma
- 39:14 London (SOAS), Area studies: Far East, MA
- 39:15 London (SOAS), Area studies: South Asia, MA
- 39:16 London (SOAS), Area studies: South East Asia, MA
- 39:17 London (SOAS), Indonesian and Malay studies, MA
- 39:18 London (SOAS), Oriental and African religious studies, MA
- 39:19 London (SOAS), Politics, MSc
- 39:20 Oxford, Chinese studies, MSt
- 39:21 Oxford, Oriental studies, MPhil
- 39:22 Oxford, Syriac studies, MSt
- 39:23 York, Asian politics, MA

# SOCIAL SCIENCES AT GLASGOW

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Political Theory and Philosophy  
Russian for Social Scientists  
Scottish Government & Administration  
Social Work  
Socialist Theories & Movements  
Sociology  
Soviet & East European Studies  
Town & Regional Planning  
Urban Policy

**Details available from: Clerk to the Faculty of Social Sciences, Adam Smith Building, University of Glasgow, Glasgow G12 8RT**

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- Cuneiform studies
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- Medieval Arabic thought
- Modern Middle Eastern studies
- Indian studies
- Modern Jewish studies
- Jewish studies in the Graeco-Roman period
- Islamic art and architecture
- Eastern Christian studies
- Ottoman studies
- Classical and Medieval Islamic history

**MSt      a newly instituted  
1 year degree by instruction  
available in**

- Chinese studies
- Classical Armenian studies
- Syriac studies
- Jewish studies in the Graeco-Roman period
- Modern Jewish studies

Further information from **The Secretary Graduate Studies Committee Oriental Institute, Pusey Lane, Oxford OX1 2LE**

## 40 Regional studies: East Europe

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 40:1 Bath, Modern languages, MPhil/PhD**
- 40:2 Birmingham, Russian and East European studies, MA/MLitt/MSocSc/MPhil/PhD**
- 40:3 Bradford, Yugoslav studies, MPhil/PhD**
- 40:4 Glasgow, Soviet and East European studies, MLitt/PhD;** supervision available; research areas and projects mainly in social sciences and hist (esp economics and comparative economics, politics, Soviet and East European foreign policy), extending to lit and media, library resources on USSR, Yugoslavia, Poland, Czechoslovakia and Hungary (and now China). Contact Professor WV Wallace
- 40:5 Keele, Russian studies, MA/PhD**
- 40:6 London (SSEES), Slavonic and East European studies, MPhil/PhD**
- 40:7 Oxford, Slavonic and East European studies, MLitt/DPhil**
- 40:8 Sussex, Russian studies, MPhil/DPhil**
- 40:9 Wales (Swansea), Russian and East European studies, MA/MSc(Econ)/PhD**
- 40:10 Wolverhampton Poly, Languages and European studies, MPhil/PhD (CNA)**

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 40:11 Birmingham, Russian and East European studies, MSocSc**
- 40:12 Essex, Soviet government and politics, MA**
- 40:13 Glasgow, Soviet and East European studies, MPhil/Diploma, 2 yrs f-t (exceptionally 1 yr): 3 yrs p-t (MPhil), 1 yr f-t (Diploma); syllabus:** 4 of Soviet economy, Soviet hist, Soviet social structure, Soviet industrial relations, Soviet politics and law, E European politics and economics 1 and 2, Soviet-type international economics, Soviet foreign policy, Soviet Russian lit or criticism, Russian revolution, politics and economy of China, Marxist thought, hist of international communism, Marxism-Leninism, Marxist economics; exams, plus dissertation for MPhil. Contact Professor WV Wallace
- London (LSE), Politics and government of Russia, MSc**
- London (SSEES), Area studies: Eastern Europe and Russia, MA**
- London (SSEES), Politics and government of Russia, MSc**
- London, Russian and East European studies, MPhil See page 209**
- Sussex, Russian studies, MA**

**Consult**  
an  
institution's  
official  
prospectus  
before  
applying

UNIVERSITY OF OXFORD



MPH  
RUSSIAN AND EAST  
EUROPEAN STUDIES

This MPH degree and the course taught on it is designed to provide students with a working knowledge of Russia and the countries and peoples which are part of other East European regions. The programme provides a solid foundation in the subjects which are the focus of the study of the USSR and East Europe, and has the purpose of providing a basis for the study of the USSR and East Europe in the Soviet Union and East Europe, theory and practice. Subjects for the further optional papers will then be chosen from a wide choice of optional subjects in the social sciences, history and literature for which excellent teaching and library facilities are available.

For the programme of study and a list of the optional papers, see the prospectus for the MPH degree.



# 41 Regional studies: Europe

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## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 41:1 **Aston**, *Modern languages*, MPhil/PhD
- 41:2 **Bath**, *Modern languages*, MPhil/PhD
- 41:3 **Bradford**, *Languages and European studies*, MPhil/PhD
- 41:4 **Coventry (Lanchester) Poly**, *Language studies*, MPhil/PhD (CNAACNA)
- 41:5 **Edinburgh**, *European governmental studies*, MPhil/PhD
- 41:6 **Edinburgh**, *Scottish studies*, MLitt/PhD See page 212
- 41:7 **Exeter**, *Western European studies*, MPhil/PhD
- 41:8 **Glasgow**, *Hispanic studies*, MLitt/PhD
- 41:9 **Hull**, *European studies*, MPhil/PhD
- 41:10 **Keele**, *Geography*, MA/PhD
- 41:11 **Kent**, *European studies*, MPhil/PhD
- 41:12 **Lancaster**, *German studies*, MPhil/PhD
- 41:13 **London (Warburg)**, *Combined historical studies*, MPhil/PhD
- 41:14 **Loughborough**, *European studies*, MA/PhD
- 41:15 **Poly of Central London**, *Languages*, MPhil/PhD
- 41:16 **Poly of North London**, *History, philosophy and European studies*, MPhil/PhD (CNAACNA)
- 41:17 **Reading**, *European and international studies*, MPhil/PhD
- 41:18 **Reading**, *French studies*, MPhil/PhD
- 41:19 **Reading**, *German*, MPhil/PhD
- 41:20 **Reading**, *Italian studies*, MPhil/PhD
- 41:21 **South Bank Poly**, *European studies*, MPhil/PhD (CNAACNA)
- 41:22 **Sussex**, *Contemporary European studies*, MPhil/DPhil
- 41:23 **Ulster**, *European studies and modern languages*, MPhil/DPhil
- 41:24 **Wolverhampton Poly**, *Languages and European studies*, MPhil/PhD (CNAACNA)

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 41:25 **Belfast**, *Social anthropology (community studies in Western Europe)*, MA
- 41:26 **Birmingham**, *European culture and society*, MA
- 41:27 **Durham**, *Western European political co-operation and economic integration*, MA
- 41:28 **Ealing CHE**, *Contemporary German studies*, MA/Diploma (CNAACNA)
- 41:29 **Edinburgh**, *European governmental studies*, MPhil
- 41:30 **Edinburgh**, *Scottish studies*, MLitt
- 41:31 **Essex**, *Western European politics*, MA
- 41:32 **Exeter**, *Economics of the European Community*, MA
- 41:33 **Exeter**, *Western European social studies*, MA
- 41:34 **Hull**, *Area studies: Britain and the Low Countries*, MA/Doctoraal
- 41:35 **Hull**, *European integration and co-operation*, MA
- 41:36 **Lancaster**, *German studies (intellectuals in East and West Germany)*, MA

- 41 37 London (LSE), *European studies*, MSc  
 41 38 London (LSE), *Politics and government of Western Europe*, MSc  
 41 39 Loughborough, *Modern French studies*, MA  
 41 40 Loughborough, *Post war German studies*, MA  
 41 41 Newcastle Poly, *French, German, Russian or Spanish area studies*, MA/Diploma (CNAAB)  
 41 42 Reading, *European studies*, MA  
 41 43 St Andrews, *Scottish studies*, MLitt/Diploma  
 41 44 Southampton, *Contemporary German cultural studies*, MA  
 41 45 Strathclyde, *Contemporary German studies*, MLitt  
 41 46 Surrey, *European area studies*, MA/Diploma  
 41 47 Sussex, *Contemporary European studies*, MA

## Certificates and diplomas

- 41 48 Hull, *Western European studies*, Diploma  
 41 49 Leeds Poly, *European community law and integration*, Diploma

## European Area Studies

## UNIVERSITY OF SURREY

Degree MA/Diploma

Length of course 12 months full time (MA) 9 months full time (Diploma)

No. of places 15

\* \* \* \* \*

Structure and assessment Students take a core course comprising European history since 1945 contemporary West and East European institutions and issues theoretical approaches to the study of Europe. Students also choose two of three parallel options covering recent history political social economic and intellectual

Entrance requirements A good bachelor's degree or equivalent either in an appropriate foreign language or a relevant social science (preferably with a competent reading knowledge of French German or Russian)

Head of Department Professor N B Reeves  
 Course Convenor Dr C G Flood

Application and enquiries The Departmental Secretary  
 Department of Linguistic and International Studies  
 University of Surrey Guildford GU2 5XH  
 Telephone 0483 571281 ext 2842

## School of Scottish Studies



Oilthaigh Dhun-Eideann

### **MLitt/PhD in Scottish Studies**

MLitt, 2 yrs f-t; 1 or combination of 2 subjs (with dissertation), in Scottish context from: lit, traditional tales and songs, ethnomusicology, social life and hist, custom and belief, material culture, and place names.

MLitt/PhD; supervision available in following areas: Scottish lit, traditional songs, ethnomusicology, social life and hist, custom and belief, material culture, place names.

### **MLitt in Oral Tradition and Ethnology**

2 yrs f-t; intended for English-speaking students who wish to prepare for research in the ethnology, folklore, or related aspects of any culture or area of their own choice.

*Further information from*

**Professor J MacQueen,**

**School of Scottish Studies, 27 George Square,  
Edinburgh EH8 9LD**

# List of chapter headings and numbers

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42 and 43

## 42 Regional studies: Middle and Near East

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.*

- 42 1 Cambridge, Oriental studies MLitt/PhD  
 42 2 Durham, Oriental studies, MA/MLitt/PhD  
 42 3 Edinburgh, Arabic and Islamic studies MLitt/PhD  
 42 4 Edinburgh, Turkish studies, MLitt/PhD  
 42 5  
 42 6  
 42 7  
 42 8

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 42 9 Durham, Human geography of the Middle East and Mediterranean MA  
 42 10 Edinburgh, Ancient Near Eastern and East Mediterranean studies MLitt  
 42 11 Exeter, Politics with special reference to the Middle East MA  
 42 12 Kent, Islamic studies, MA/Diploma  
 42 13  
 42 14  
 42 15  
 42 16

### Certificates and diplomas

- 42 17 Birmingham, Islamic studies Diploma

# 43 Science and technology: history and philosophy

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 43:1 **Aberdeen**, *History and philosophy of science*, MLitt/MSc/PhD
- 43:2 **Bath**, *History of technology*, MSc/PhD
- 43:3 **Belfast**, *History and philosophy of science*, MA/MSc/PhD
- 43:4 **Cambridge**, *History and philosophy of science*, MLitt/PhD
- 43:5 **Glasgow**, *History of science*, MLitt/PhD
- 43:6 **Kent**, *History, philosophy and social studies of science*, MPhil/PhD
- 43:7 **Leeds**, *History and philosophy of science*, MPhil/PhD; research may be supervised in wide area of hist and phil of science from early mod period to 20th cent; sp areas in which research encouraged: science in Scottish Enlightenment, hist of physics, hist of biol esp evolution and genetics in 19th and 20th cents, science and society since 1800, scientific insts, phil of science, science and ideology, scientific methodology. Contact Dr Jonathan Hodge
- 43:8 **Leicester**, *History and social relations of science*, MPhil/PhD
- 43:9 **London (Imperial)**, *History of science or technology*, MPhil/PhD
- 43:10 **London (KQC)**, *History and philosophy of science*, MPhil/PhD
- 43:11 **London (UC)**, *History and philosophy of science*, MPhil/PhD. See page 215
- 43:12 **Manchester (UMIST)**, *History of science and technology*, MSc/PhD
- 43:13 **Open**, *History of science and technology*, BPhil/MPhil/PhD
- 43:14 **Teesside Poly**, *History of science and technology*, MPhil/PhD

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 43:15 **Cambridge**, *History and philosophy of science*, MPhil. See page 215
- 43:16 **Cambridge**, *History of medicine*, MPhil. See page 215
- 43:17 **Hull**, *Philosophy of science*, MSc
- 43:18 **Kent**, *History, philosophy and social studies of science*, MA/MSc
- 43:19 **Lancaster**, *History of science*, MA
- 3:20 **Leeds**, *History of scientific thought*, MA
- :21 **London (Imperial)**, *History and philosophy of science*, MSc/DIC
- 3:22 **London (Imperial)**, *History of technology*, MSc/DIC
- 43:23 **London (KQC)**, *History and philosophy of science*, MPhil
- 43:24 **London (KQC)**, *History and philosophy of science and mathematics*, MSc
- 43:25 **London (UC)**, *History and philosophy of science*, MSc. See page 215
- 43:26 **Manchester (UMIST)**, *History of science and technology*, MSc

## Certificates and diplomas

- 43:27 **Leeds**, *History and philosophy of science*, Diploma

## UNIVERSITY COLLEGE LONDON

### Department of History and Philosophy of Science

#### MSc/MPhil/PhD



of science, including social problems associated with contemporary science

Research supervision is available for MPhil and PhD topics in history of science and medicine, philosophical aspects of modern physics, science policy, science education and the philosophy of science

Rich source materials are available in the College's Graves and History of Science Collections. The Wellcome Institute for the History of Medicine and other major libraries are within easy reach

Further information from: Departmental Secretary, Dept of History & Philosophy of Science, University College London, Gower Street, London WC1E 6BT

## Cambridge University

Department of History and  
Philosophy of Science  
including the Wellcome Unit  
for the History of Medicine  
MPhil/PhD



The Department offers research supervision over a

disertation

PhD research is possible in any area of the history or philosophy of science and medicine

Further information from: Dr D Papineau (History and Philosophy of Science) or Dr A Cunningham (History of Medicine) Department of History and Philosophy of Science, Free School Lane, Cambridge CB2 3RH

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for additional  
information

Indicate the page number

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## 44 Science, technology and society

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 44:1 Aston, Interdisciplinary studies, MPhil/PhD**
- 44:2 Bradford, Science and society, MPhil/PhD**
- 44:3 Bristol Poly, Science, MPhil/PhD (CNA)**
- 44:4 Edinburgh, Science studies, MPhil/PhD;** supervision available; *science studies unit: hist and contemp sociol of scientific knowledge:* sp emphasis on 19th- and early 20th-cent Britain (eg Mechanics' Insts and other 'popular' education, provincial societies, phrenology and brain anatomy, eugenics, science and women's social role, early notions of mental illness, scientific naturalism and notions of natural order and rationality, controversies over taxonomy, professionalisation of ecology, holism in biol, disputes in evolutionary theory, development of nutrition science), mod physical sciences (eg radio and x-ray astronomy, high energy physics, 'deviant' quantum theories); *sociol of technology:* development of adv information technology, numerically-controlled machine tools and robots in 3rd World countries (inc field trips). Contact Dr DO Edge
- 44:5 Glasgow, Science education, MSc/PhD**
- 44:6 Lancaster, Independent studies, MPhil/PhD**
- 44:7 London (Imperial), Social and economic studies, MPhil/PhD**
- 44:8 Loughborough, Design and technology, MPhil/PhD**
- 44:9 Manchester, Science and technology policy, MSc/PhD**
- 44:10 Manchester Poly, Advanced studies, MPhil/PhD (CNA)**
- 44:11 Mid-Kent CH & FE, Science, MPhil/PhD (CNA)**
- 44:12 NE London Poly, Independent study, MPhil/PhD (CNA)**
- 44:13 Open, Alternative technology, BPhil/MPhil/PhD**
- 44:14 Open, Configurational studies, BPhil/MPhil/PhD**
- 44:15 Open, Design, BPhil/MPhil/PhD**
- 44:16 Poly of Wales, Science, MPhil/PhD (CNA)**
- 44:17 Salford, Impact assessment, MSc/PhD**
- 44:18 Stirling, Technological economics, MSc/PhD**
- 44:19 Strathclyde, Energy studies, MSc/PhD**
- 44:20 Surrey, Energy economics, MPhil/PhD**
- 44:21 Sussex, Logic and scientific method, MPhil/DPhil**
- 44:22 Sussex, Science and technology policy, MPhil/DPhil;** supervision available for research in Science Policy Research Unit; staff interests inc: *innovation:* technical change and competitiveness in automobile, machine tool and process plant industries; *energy:* problems of energy policy in relation to econ and technological change; *developing countries:* technology policy research esp energy policy for developing countries; *govt technology policy:* industrial innovation, measurement of inputs and outputs of research and development; *corporate strategy and management of innovation:* innovation and design in manufacturing industry; *military technology and arms limitation:* military technology and arms limitation, disarmament and development; *science policy and evaluation research:* policy analysis of basic research, evaluation of govt policies for science and technology; *new technology and skill reqs:* changing technology and skill implications in industry; *technology and social change:* social indicators, social forecasting. Contact Sally Marjoram
- 44:23 Sussex, Social implication of technical change, MPhil/DPhil**
- 44:24 Wales (UWIST), Management, engineering production and economics, MA/MScEcon/PhD**
- 44:25 Warwick, Science education, MA/MSc/PhD**
- 44:26 West London IHE, Physical education and sciences, MPhil (CNA)**





## Certificates and diplomas

- 44:55 Brunel, *Petroleum technology and management systems*, Diploma  
44:56 Christ Church C (Canterbury), *Science education*, Diploma (ASE)  
44:57 Cornwall CF & HE, *Science education for teachers in primary schools*, Diploma (ASE)  
44:58 Crewe and Alsager CHE, *Science education*, Diploma  
44:59 Liverpool IHE, *Science education*, Diploma  
44:60 London (Inst Ed), *Primary science education*, Diploma  
44:61 London (KQC), *Science or mathematics education for overseas students*, Diploma  
44:62 New C (Durham), *Teaching primary science*, Diploma (Durham)  
44:63 NE Wales IHE, *Science in the primary school*, Diploma  
44:64 Roehampton IHE, *Practice of science education*, Diploma  
44:65 St Mark & St John C (Plymouth), *Science education for teachers in primary schools*, Diploma  
44:66 St Mary's C (Strawberry Hill), *Primary science*, Diploma (Surrey)  
44:67 Surrey, *Economics of energy and development*, Diploma  
44:68 Warwick, *Industry and education*, Diploma  
44:69 Warwick, *Science education*, Diploma

### Imperial College of Science and Technology (University of London)

Department of Social and  
Economic Studies

#### A New MSc **TECHNOLOGY AND INDUSTRIAL ORGANISATION**

This course examines the economic and social issues which arise from changes in technology and industrial organisation and combines theoretical analysis with practical understanding. The course is for full-time and part-time students and begins in October. This course is accepted by Research Councils as suitable for tenure of studentships. Applications are invited from good graduates in social science, engineering and science. Work experience desirable but not essential.

Opportunities for research studentships are also available. Applications are particularly welcome from students who wish to study subjects at the interface between science, engineering, industry and society, for example through a concern with new technology, health and safety at work, investment behaviour.

For further particulars and application forms please write to: The Postgraduate Tutor, Department of Social and Economic Studies, Imperial College, 52/53 Princes Gate, Exhibition Road, London SW7 2PG.

## University of Stirling

### Postgraduate Studies in Technological Economics

This established programme for *engineering or science graduates* offers a taught course leading to a DIPLOMA or MSc DEGREE. Available by research is a PhD DEGREE. Work experience is welcome.

#### A MANAGEMENT TRAINING

The MSc/Diploma course teaches management skills useful in industry or government service where *innovation* is of importance. Scientific and technical knowledge is placed in an economic and business context. The programme is administered by the Department of Business and Management and by the Department of Economics.

For information on entry, and on financial support, please contact

#### Course Director

MSc in Technological Economics  
Technological Economics Research Unit  
University of Stirling  
Scotland FK9 4LA

## 45 Social sciences: applied

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

- 45 1 Aberdeen, *Social work*, MLitt/PhD  
 45 2 Bath, *Social administration and social work*, MPhil/PhD  
 45 3 Bath, *Sociology and social administration*, MPhil/PhD  
 45 4 Birmingham, *Social administration*, MSocSc/MPhil/PhD  
 45 5 Birmingham, *Social work*, MA/MPhil/PhD  
 45 6 Birmingham, *Social work*, MA/MPhil/PhD  
 45 7 Birmingham, *Social work*, MA/MPhil/PhD  
 45 8 Birmingham, *Social work*, MA/MPhil/PhD  
 45 9 Birmingham, *Social work*, MA/MPhil/PhD  
 5 10 Birmingham, *Social work*, MA/MPhil/PhD  
 5 11 Birmingham, *Social work*, MA/MPhil/PhD  
 5 12 Birmingham, *Social work*, MA/MPhil/PhD  
 5 13 Glasgow, *Social administration and social work*, MLitt/PhD  
 5 14 Glasgow, *Social administration and social work*, MLitt/PhD  
 5 15 Glasgow, *Social administration and social work*, MLitt/PhD  
 5 16 Glasgow, *Social administration and social work*, MLitt/PhD  
 5 17 Glasgow, *Social administration and social work*, MLitt/PhD  
 5 18 Lancaster, *Social administration*, MPhil/PhD  
 5 19 Leeds, *Adult and continuing education*, MPhil/PhD  
 5 20 Leeds, *Social policy and health services studies*, MPhil/PhD  
 5 21 Leicester, *Social work*, MA/MPhil/PhD  
 5 22 Leicester, *Social work*, MA/MPhil/PhD  
 5 23 Leicester, *Social work*, MA/MPhil/PhD  
 5 24 Leicester, *Social work*, MA/MPhil/PhD  
 5 25 Leicester, *Social work*, MA/MPhil/PhD  
 5 26 Leicester, *Social work*, MA/MPhil/PhD  
 5 27 Leicester, *Social work*, MA/MPhil/PhD  
 5 28 Leicester, *Social work*, MA/MPhil/PhD  
 5 29 Leicester, *Social work*, MA/MPhil/PhD  
 5 30 Nottingham, *Social administration and social work*, MPhil/PhD See page 224  
 5 31 Plymouth Poly, *Social and political studies*, MPhil/PhD (CNA)A  
 5 32 Plymouth Poly, *Social work health and community studies*, MPhil/PhD (CNA)A supervision available for research interests cover all aspects of personal social services recent studies include care of elderly homelessness treatment of juvenile offenders handicapped children community development in rural areas Contact Academic Registrar  
 5 33 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNA)A  
 5 34 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNA)A  
 5 35 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNA)A  
 5 36 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNA)A  
 5 37 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNA)A  
 5 38 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNA)A  
 5 39 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNA)A  
 5 40 Wales (Bangor), *Sociology and social administration*, MA/PhD

- 45:41 **Wales (Cardiff)**, *Social administration and social work*, MScEcon/PhD
- 45:42 **Warwick**, *Applied social studies*, MA/MPhil/PhD
- 45:43 **York**, *Social policy and social work*, MPhil/DPhil

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 45:44 **Bath**, *Applied social studies*, MSc/Diploma
- 45:45 **Birmingham**, *Mental disorder studies*, MSocSc/Diploma
- 45:46 **Birmingham**, *Social administration*, MSocSc
- 45:47 **Birmingham**, *Social policy and politics in Western industrial societies*, MSocSc
- 45:48 **Birmingham**, *Social services management*, MSocSc
- 45:49 **Birmingham**, *Social work*, MSocSc/Diploma
- 45:50 **Bradford**, *Social and community work studies*, MA
- 45:51 **Bristol**, *Social services planning*, MSc
- 45:52 **Brunel**, *Public and social administration*, MA/Diploma *See page 223*
- 45:53 **East Anglia**, *Social work*, MA
- 45:54 **East Anglia**, *Social work*, MSW
- 45:55 **Edinburgh**, *Applied social work studies*, MSc/Diploma
- 45:56 **Edinburgh**, *Social and public policy*, MSc/Diploma
- 45:57 **Essex**, *Social service planning*, MA/Diploma
- 45:58 **Exeter**, *Social work*, BPhil/Diploma
- 45:59 **Hull**, *Applied social studies*, MA/Diploma
- 45:60 **Hull**, *Social work studies*, MA *See page 225*
- 45:61 **Kent**, *Applied psychology of mental handicap services*, MA
- 45:62 **Kent**, *Social work*, MA/Diploma
- 45:63 **Lancaster**, *Social services management*, MSc
- 45:64 **Leicester**, *Social work*, MA, 2 yrs f-t (hons deg in any subj accepted); centres on application of concepts to situations; *key themes inc:* human development, assessment of motivation, social work with gps and families, social policies. **Contact Registrar (Higher Degrees)**
- 45:65 **Leicester Poly**, *Urban processes, problems and policies*, MA (CNAAB)
- 45:66 **London (Goldsmiths')**, *Social policy and administration*, MA
- 45:67 **London (LSE)**, *Social work studies*, MSc
- 45:68 **Manchester**, *Applied social research*, MA(Econ)/Diploma
- 45:69 **Manchester**, *Psychiatric social work*, MSc/Diploma
- 45:70 **Manchester**, *Social administration*, MA(Econ)
- 45:71 **Manchester**, *Social administration and social work*, MA(Econ)
- 45:72 **Newcastle**, *Social work*, MPhil
- 45:73 **Nottingham**, *Social policy and administration*, MA *See page 224*
- 45:74 **Nottingham**, *Social work*, MA *See page 224*
- 45:75 **Oxford**, *Applied social studies*, MSc
- 45:76 **Reading**, *Counselling and guidance*, MA, 3 yrs p-t (deg and recognised qual in counselling or substantial practical experience req); *course inc:* lectures, seminars and practical, project and gp work; assessment of coursework, written papers, project, agency report, extended research report. **Contact Miss A McCord, Assistant Registrar & Secretary**
- 45:77 **Roehampton IHE**, *Psychological counselling*, MSc (Surrey)
- 45:78 **Sheffield**, *Applied social studies*, MA/Diploma
- 45:79 **Southampton**, *Applied social studies*, MSc/Diploma
- 45:80 **Southampton**, *Social administration*, MSc(SocSc)/Diploma
- 45:81 **Southampton**, *Social work*, MPhil
- 45:82 **Stirling**, *Applied social research*, MSc
- 45:83 **Surrey**, *Applied social studies*, MSc/Diploma
- 45:84 **Sussex**, *Social work*, MSW

- 45 85 Ulster, *Applied social research*, MSc/Diploma Certificate  
 45 86 Ulster, *Guidance and counselling* MSc/Diploma  
 45 87  
 45 88  
 45 89 page 224  
 45 90 Wales (Swansea), *Social planning*, MSc(Econ)  
 45 91 Wales (Swansea), *Social sector planning and management*, MSc(Econ)  
 45 92 Warwick, *Applied social studies*, MA  
 45 93 York, *Social work*, MSW/Diploma

## Certificates and diplomas

- 45 94 Birmingham, *Social services management* Diploma  
 45 95 Birmingham Poly, *Careers guidance*, Diploma  
 45 96 Bretton Hall CHE, *Guidance and counselling* Advanced Diploma  
 45 97 Bristol, *Applied social studies*, Certificate  
 45 98 Bristol, *Residential social work* Certificate  
 45 99 Bristol, *Social administration*, Diploma  
 45 100 Bristol Poly, *Careers guidance*, Diploma  
 45 101 Brunel, *Youth and community studies*, Diploma  
 45 102 Christ Church C (Canterbury), *Youth and community work*, Certificate  
 45 103 Croydon C, *Applied social studies* Diploma  
 45 104 East Anglia, *Social welfare* Diploma  
 45 105 Edinburgh, *Social work*, Diploma  
 45 106 Glasgow, *Social work*, Diploma  
 45 107 Gwent CHE (Newport), *Counselling and pastoral care*, Diploma  
 45 108 Hatfield Poly, *Careers education and guidance*, Diploma (CNAAB)  
 45 109 Hatfield Poly, *Counselling*, Diploma (CNAAB)  
 45 110 Kent, *Alcohol counselling and consultation* Diploma  
 45 111 Lancashire Poly, *Applied social studies* Diploma  
 45 112 Lancaster, *Social work*, Diploma  
 45 113 Leeds, *Applied social studies*, Diploma  
 45 114 Leeds Poly, *Social work*, Diploma  
 45 115 Liverpool, *Applied social studies* Diploma  
 45 116 Liverpool, *Social administration* Diploma  
 45 117 Liverpool Poly, *Applied social studies* Diploma  
 45 118  
 45 119  
 45 120  
 45 121 Manchester, *Social administration*, Diploma  
 45 122 Manchester, *Social administration and social work*, Diploma  
 45 123 Manchester Poly, *Social work*, Diploma (CNAAB)  
 45 124 Manchester Poly, *Youth and community work*, Diploma  
 45 125  
 45 126  
 45 127 Newcastle, *Social work*, Diploma  
 45 128 Newcastle Poly, *Careers guidance*, Diploma  
 45 129 NE London Poly, *Careers guidance* Diploma  
 45 130 NE London Poly, *Counselling and guidance* Diploma (CNAAB)  
 45 131 NE London Poly, *Counselling and pastoral care with special reference to schools*, Diploma (CNAAB)

- 45:132 Oxford, *Social administration*, Diploma  
 45:133 Oxford, *Social studies*, Diploma  
 45:134 Paisley CT, *Alcohol studies*, Diploma/Certificate  
 45:135 Paisley CT, *Careers guidance*, Diploma  
 45:136 Poly of Wales, *Careers guidance*, Diploma  
 45:137 Reading, *Counselling and guidance*, Diploma, 1 yr f-t (deg or approved alternative qual an 2 yrs' teaching or other relevant experience req); designed for those intending to work in counselling, guidance or pastoral care in education and other settings in which counselling and communication skills of prime importance. Contact Miss A McCord, Assistant Registrar & Secretary  
 45:138 Reading, *Vocational guidance*, Certificate, 1 yr f-t (deg or other approved qual req); practical: theoretical background to careers and education guidance; further information available School of Education. Contact Miss A McCord, Assistant Registrar & Secretary  
 45:139 South Bank Poly, *Applied social studies*, Diploma (CNAAB)  
 45:140 Stirling, *Social work*, Diploma  
 45:141 Strathclyde, *Careers guidance*, Diploma  
 45:142 Surrey, *Practice of social welfare in mental health*, Certificate  
 45:143 Thames Poly, *Youth and community work*, Diploma  
 45:144 Trent Poly, *Applied social studies*, Diploma  
 45:145 Ulster, *Addiction studies*, Diploma  
 45:146 Ulster, *Social work*, Diploma  
 45:147 Wales (Cardiff), *Social work*, Diploma See page 224  
 45:148 Wales (Swansea), *Applied social studies*, Diploma  
 45:149 Wales (Swansea), *Social policy and administration*, Diploma  
 45:150 West London IHE, *Applied social studies*, Diploma  
 45:151 York, *Social administration*, Diploma

## University of Hull

### Faculty of Social Sciences

The following taught masters courses are available:

#### Master of Arts

Political Philosophy  
 International Politics  
 Theory and Practice of Politics in the Third World  
 Modern British Politics  
 European Integration and Co-operation  
 Policy Processes in Industrial Societies  
 International Law and Politics  
 Criminology  
 Social Work Studies  
 Sociology of Developing Societies  
 South East Asian Studies  
 Management Systems

#### Master of Arts/Doctoral

(jointly with Rotterdam University)  
 Area Studies: Britain and the Low Countries

#### Master of Science

Management Sciences  
 Health Administration and Research  
 Health Education and Health Promotion  
 Industrial Psychology

#### Master of Science in Economics

Economics  
 Economics and Econometrics  
 Economics and Labour Economics

Further details about these courses and about opportunities for independent research are available from:

Postgraduate Office  
 University of Hull  
 Hull HU6 7RX

### Department of Social Theory and Institutions

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR

### Postgraduate Social Work Studies

A course of 12 months' full-time study leading to award of the CQSW and to eligibility for the University of Wales Diploma in Social Work, which may be followed by 2 years' part-time study to prepare a dissertation in submission for an MA degree in Social Work. The course is designed to equip experienced graduates for practice, research and administration in both the statutory and voluntary sectors of Social Work and Social Services.

### Sociology/Social Administration MA/PhD

Supervision is available from members of staff in the Department on a wide range of Sociology and Social Administration topics. In addition students with research interests in Care Networks for the elderly, other client groups, Mental Handicap or the Pen System may be attached to ongoing research projects in the Centre for Social Policy Research and Development.

Enquiries, further information and details from  
 Penny Guttridge (Social Work Course)  
 John Borland (MA/PhD research in Sociology or Social Administration)

# Brunel

THE UNIVERSITY OF WEST LONDON

## FACULTY OF SOCIAL SCIENCES

*The Faculty offers the following taught Masters courses  
(\*2 years part-time, one day per week # 1 year full time)*

**MA in Public and Social Administration\* #**  
Department of Government

Core courses in theories and methods and social policy and administration plus one special subject from: history of social policy education health services housing personal social services social security the voluntary sector community and race relations  
*Dissertation*

**MA in Socio-Legal Studies\* #**  
Departments of Law and Human Sciences

Core courses in socio-legal studies plus two options chosen from courses in law and sociology  
*Dissertation*

**MA in Industrial Relations\***  
Department of Human Sciences

Courses in industrial relations industrial sociology organisational behaviour labour law  
*Dissertation*

**MSc in Intelligent Systems\* #**  
Department of Human Sciences and Faculty of Technology

Courses in simulation and modelling brain systems cognitive psychology science of mind natural adaptive systems automated reasoning expert systems natural and artificial vision programming PASCAL LISP PROLOG  
*Dissertation*

**MA in Public Policy\* #**  
Departments of Economics and Government

Core courses in analytical method and public policy analysis plus one special subject from a particular policy area eg health economics industrial policy social security educational policy local government studies  
*Dissertation*

### Entry Qualifications

Courses are open to graduates and to those with relevant experience and professional qualifications. ESRC awards may be available. In certain circumstances students lacking formal qualifications may be admitted to study for a Graduate or Postgraduate Diploma. Applications are welcomed from both developed and developing countries.

**The Faculty also offers research programmes, part time or full time leading to the award of MPhil, LLM, or PhD**

Students may follow a one-year full time two year part time taught core course in methods and methodology together with specialised seminar programmes in their chosen area of research, before commencing their thesis.

Supervision is offered in a wide range of topics in the Social Sciences including development economics, health economics, social policy, political systems and theory, communication and information studies, science, technology and society, cognition, perception, psychology of health and illness, welfare law, housing law, consumer law, regulation, legal history, the criminal justice system, socio-legal studies.

Bursaries for full time study may be available from the Faculty.

For further particulars please write to

The Faculty Officer (Social Sciences), Ref CRAC  
Brunel University, Uxbridge  
Middlesex UB8 3PH  
Tel Uxbridge 56461 Telex 261173G

UNIVERSITY COLLEGE CARDIFF

## School of Social Work

### Postgraduate Diploma in Social Work

The course prepares graduates without extensive social science degrees for social work in a variety of work settings: probation, generic social work, community work, residential social work, medical social work. Previous voluntary work or social work experience is advantageous. Some places are available for mature non-graduate students. Pre-entry English language courses are available in the College.

**Course content:** Social work methods, social policy, psychology, human socialisation, sociology, social philosophy, three practice placements.

**Awards:** Diploma in Social Work and Certificate of Qualification in Social Work.

**Length:** 22 months, October (Year 1) to July (Year 2).

**Enquiries to Admissions Tutor:** Mr D Fowler. Quote reference DSW/1.

### MSc (Econ) in Applied Social Studies

This course is an advanced course for experienced social workers. It prepares social workers for senior posts in social work agencies or teaching posts.

**Core courses:** Issues and methods in social work, social policy research.

**Options:** Administration, residential social work, research methods, social work education.

**Assessment:** Course essays and dissertation.

**Length:** 13 months (October – October).

**Awards:** MSc (Econ) Recognised as a post-qualifying course by Central Training Council for Social Work.

**Enquiries to Course Tutor:** Miss R Jefferson. Quote reference ASS/1.

## NOTTINGHAM UNIVERSITY

### Department of Social Administration & Social Work

**Social administration and social work, MPhil/PhD:** supervision available, areas of particular interest include welfare rights in social policy, criminology, women's studies, health admin, 3rd World social policy, and most other areas of social policy.

**Social policy and administration, MA, 1c yr 1-1 2 yrs p-t:** designed for those who wish to undertake p-g work in social admin but not by research of particular interest to those employed in depts of c and local govt concerned with social welfare and social services, **course content:** social policy and admin, 2 options from list inc criminology, health admin, education, women in welfare, and dissertation.

**Social work, MA, 1 or 2 yrs 1-1 (according to quals, relevant work experience desired), common base approach,** teaching based around common skills and issues: working with children, with offenders, functioning of courts, work with individuals, gps, families, marriages and communities, 2-yr course also inc psychol, social admin, sociol, assessment essays, fieldwork projects, field placements and dissertation.

**In each case enquires etc to Prof A J Willcocks, Dept of Social Administration & Social Work, Nottingham University, Nottingham NG7 2RD.**

## SOCIAL STUDIES AT EXETER

Applications are invited for entry to the following postgraduate programmes:

- MA in the Economics of Finance and Investment
  - MA in the Economics of the European Community
  - MA in Politics with Special Reference to the Middle East
  - MA in Population Research
  - MA in Western European Social Studies
  - MPhil/PhD by research
- The Faculty of Social Studies offers supervision in a wide range of fields within the following subject areas:

- ECONOMIC HISTORY
- ECONOMICS (including Accountancy and Agricultural Economics)
- POLITICS
- PSYCHOLOGY (the Diploma in Science Studies for Overseas Students is offered as a preparation for research)
- SOCIOLOGY (including Social Work and Socio-Legal Studies)

For further information, and an application form, contact:  
Ms Austin (Assistant Registrar), University of Exeter, Northcote House,  
The Queen's Drive, Exeter EX4 4QJ Tel (0392) 263044



## **Department of Social Policy and Professional Studies**

### **UNIVERSITY OF HULL**

**Masters Programmes in Social Work Studies,  
Criminology and Health Administration and  
Research**

● **MA/Diploma In Social Work Studies**

A professional social work course, successful  
completion carries entitlement to the award of  
the Certificate of Qualification In Social Work  
(CQSW)

● **MSc/Diploma In Health Administration  
and Research**

An advanced course for graduates seeking a  
career in health research or in the Health Service  
as well as for experienced health professionals

*Enquiries, further information, and details of  
awards from: Department of Social Policy and  
Professional Studies, University of Hull HU6 7RX.*

*Applications for Social Work Studies through the  
clearing houses for CQSW courses (fourth floor  
Myson House, Railway Terrace, Rugby CB21 3HT)*

# **Overseas students**

See editorial on  
page 7 onwards  
for information on  
UK postgraduate  
study





## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normal as part of these courses.

- 46 32 City, Survey methods, MSc/Diploma
- 46 33 Cranfield, Policy studies in social order MSc
- 46 34 Essex, History and philosophy of social and political science, MA
- 46 35 Kent, Social research, MA
- 46 36 London (LSE), Social policy and planning MSc
- 46 37 London (LSE), Social policy and social work studies MSc
- 46 38 London (RHBC), Social work MSc
- 46 39 Middlesex Poly, Deviancy and social policy, MA/Diploma (CNAA)
- 46 40 Open, Advanced educational and social research methods MSc
- 46 41 Oxford, Social research and social policy MSc
- 46 42 Poly of North London, Sociology and social policy MA (CNAA)
- 46 43 Surrey, Social research, MSc/Diploma
- 46 44 Surrey, Social research methods MSc/Diploma
- 46 45 Sussex, Social and political thought, MA
- 46 46 Teesside Poly, Social research, MSc (CNAA)
- 46 47 York, Social policy, MA See page 228

## Certificates and diplomas

- 46 48 Belfast, Social studies, Diploma
- 46 49 Birmingham, Social sciences, Diploma
- 46 50 City of London Poly, Social policy, Diploma
- 46 51 Glasgow, Russian languages for social scientists, Certificate
- 46 52 Hull, Social studies, Certificate
- 46 53 Hull, Social studies, Diploma

# **CITY UNIVERSITY, LONDON**

## **MA in COMMUNICATIONS POLICY STUDIES**

**Full-time: One Year – Part-time: Two Years**

This taught course, which began in 1985, covers Mass Communications, Telecommunications and Information Technology. The course focuses on the Politics, Sociology and Economics of communications policy, but candidates with a good degree in any subject may apply. There is a strong international emphasis – on the Third World, Japan, the USA and Europe. British policy topics include for example:

British Telecom privatisation, the BBC and advertising, and the computer industry. A central focus is upon the policy problems posed by new technologies – satellites, fibre optics, electronic data transfer, and the new video media.

Part-time students attend for one full weekday in the first year, and spend most of their second year on a dissertation. Full-time students complete four taught courses and a dissertation between October and the following September.

The Communications Policy Centre (Director: Professor Jeremy Tunstall) also has an active research programme. Candidates may be registered for an MPhil or PhD degree by research.

*For further information and an application form please contact:*

**Ruth Newton, Communications Policy Centre,  
Department of Social Science & Humanities, The City University,  
Northampton Square, London EC1V 0HB  
Tel: 01-253 4399 ext. 4505**

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### **Social policy**

### **UNIVERSITY OF YORK**

**Degree MA**

**Length of course** 1 calendar year full-time.

**Description of course** Intended for post-qualification or post-experience work, often taken by students on secondment from senior posts in social work, adult education, etc; *course content* 3 assessable or examinable courses: social policy and administration, sociology, methods of social investigation; options may be permitted;

*2-term options:* crime and penal system; working with organisations, housing and urban planning, justice and the state, comparative social policy; plus dissertation.

**Head of department** Professor K Jones

**Applications and enquiries** Miss A Holdsworth, Social Policy and Social Work, University of York, Heslington, York YO1 5DD.

## 47 Sociology

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 47.1 **Aberdeen**, *Sociology*, MLitt/PhD
- 47.2 **Bath**, *Sociology and social administration*, MPhil/PhD
- 47.3 **Birmingham**, *Sociology*, MSocSc/MPhil/PhD
- 47.4 **Birmingham Poly**, *Sociology and applied social studies*, MPhil/PhD (CNA)
- 47.5 **Birmingham**, *Sociology*, MPhil/PhD
- 47.6 **Birmingham**, *Sociology*, MPhil/PhD
- 47.7 **Birmingham**, *Sociology*, MPhil/PhD
- 47.8 **Birmingham**, *Sociology*, MPhil/PhD
- 47.9 **Birmingham**, *Sociology*, MPhil/PhD
- 47.10 **Birmingham**, *Sociology*, MPhil/PhD
- 47.11 **Durham**, *Sociology and social policy*, MA/MPhil/PhD, supervision available, sp interests: sociol theory and phil of social science, social policy inc sociol of social policy, sociol of work and industry, sociol of the state and social movements, work applying and developing particular theoretical and
- 47.12 **Exeter**, *Sociology*, MPhil/PhD
- 47.13 **Glasgow**, *Sociology*, MLitt/PhD
- 47.14 **Glasgow**, *Sociology*, MPhil/PhD
- 47.15 **Exeter**, *Sociology*, MPhil/PhD
- 47.16 **Glasgow**, *Sociology*, MLitt/PhD
- 47.17 **Hull**, *Sociology and social anthropology*, MPhil/PhD See page 233
- 47.18 **Keele**, *Sociology and social anthropology*, MA/PhD
- 47.19 **Keele**, *Sociology and social anthropology*, MA/PhD
- 47.20 **Keele**, *Sociology and social anthropology*, MA/PhD
- 47.21 **Keele**, *Sociology and social anthropology*, MA/PhD
- techniques in social research, sexual divisions, knowledge and science Contact Graduate Admissions Tutor
- 47.22 **Leicester**, *Sociology*, MPhil/PhD
- 47.23 **Leicester**, *Sociology*, MPhil/PhD
- 47.24 **Leicester**, *Sociology*, MPhil/PhD
- 47.25 **Leicester**, *Sociology*, MPhil/PhD
- 47.26 **Leicester**, *Sociology*, MPhil/PhD
- 47.27 **Leicester**, *Sociology*, MPhil/PhD
- 47.28 **Leicester**, *Sociology*, MPhil/PhD
- 47.29 **Manchester**, *Sociology*, MA(Econ)/PhD, supervision available for research, present major fields of interest: sociol of education, urban sociol, sociol of developing countries (esp Latin America, Middle E, SE Asia), sociol of interpersonal relations, industrial sociol, adv socialist societies,

theory, the family, women's studies, ethnographic studies. Contact Dr DHJ Morgan

- 47:30 Newcastle, *Social studies*, MA/PhD**  
**47:31 NE London Poly, *Sociology*, MPhil/PhD (CNA)**  
**47:32 N Staffs Poly, *Sociology*, MPhil/PhD (CNA)**  
**47:33 Nottingham, *Sociology*, MPhil/PhD**  
**47:34 Open, *Sociology*, BPhil/MPhil/PhD**  
**47:35 Oxford, *Race relations*, MLitt/DPhil**  
**47:36 Oxford, *Socio-legal studies*, MLitt/DPhil**  
**47:37 Oxford, *Sociology*, MLitt/DPhil**  
**47:38 Plymouth Poly, *Social and political studies*, MPhil/PhD (CNA)**  
**47:39 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNA)**  
**47:40 Poly of North London, *Sociology*, MPhil/PhD (CNA)**  
**47:41 Reading, *Sociology*, MPhil/PhD**  
**47:42 Salford, *Sociology and anthropology*, MA/MSc/PhD**  
**47:43 Sheffield, *Sociological studies*, MPhil/PhD**  
**47:44 Southampton, *Sociology and social administration*, MPhil/PhD; supervision available, recent staff research interests inc: sociol of industry and business organisation inc work and influence of Elton Mayo, effects of intro of new technologies on work and organisation, technology and class structure, business organisation and ideologies; theory and development of social policy inc comparative social policy esp relating to USA and W Germany; medical sociol inc informal social networks of psychiatric patients and ways in which social relationships may change as result of psychiatric illness; English intelligentsia since 1832, patterns of hist change, distinctiveness of European states; sociol of family and friendship, ways in which family and domestic life is shaped by wider social factors, roles of informal relationships in integrating individual into society; penal and health policy inc protection of people in various forms of public care, private medicine in UK, mothers' attitudes to health visitors; rural sociol: family farming and agricultural policies in terms of Max Weber's theory of social change. Contact Dr J Hall**  
**47:45 Stirling, *Sociology*, MSc/PhD; supervision available in interdisciplinary research in sociol, social anthropology, social admin and social work, esp comparative social research, industrial relations and applied social research; current applied research concentrated in: family violence, job creation and unemployment, health and social services for elderly, development and delivery of child care services, organisation and effectiveness of state and voluntary welfare services, ethnic relations, trade union leadership, profit sharing, comparative emphasis involving different countries in EC, Scandinavia and N America; other current comparative research primarily in field of sociol of development with fieldwork concentrated in Japan, Kenya, Tanzania, Algeria and Middle E. Contact Professor DWG Timms**  
**47:46 Strathclyde, *Sociology*, MPhil/PhD**  
**47:47 Surrey, *Sociology*, MPhil/PhD**  
**47:48 Sussex, *Sociological studies*, MPhil/DPhil**  
**47:49 Teesside Poly, *Sociology*, MPhil/PhD (CNA)**  
**47:50 Thames Poly, *Sociology*, MPhil/PhD (CNA)**  
**47:51 Ulster, *Sociology and social anthropology*, MPhil/DPhil**  
**47:52 Wales (Aberystwyth), *Sociology*, MSc(Econ)/PhD**  
**47:53 Wales (Bangor), *Sociology and social administration*, MA/PhD**  
**47:54 Wales (Cardiff), *Sociology*, MScEcon/PhD**  
**47:55 Wales (Swansea), *Sociology and anthropology*, MSc(Econ)/PhD**  
**47:56 Warwick, *Sociology*, MPhil/PhD**  
**47:57 York, *Communication studies*, MPhil/DPhil**  
**47:58 York, *Sociology*, MPhil/DPhil**

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 47:59 Birmingham, *Race and education*, MSocSc**  
**47:60 Birmingham, *Socio-legal studies*, MSocSc**

- 47.61 Birmingham, *Sociology*, MSocSc  
 47.62 Bradford, *Race relations and community studies*, MSc/Diploma  
 47.63 Bradford, *Women's studies (applied)*, MA/Diploma  
 47.64 Bristol, *Race relations*, MSc  
 47.65 Brunel, *Sociology and law*, MA/Diploma  
 47.66 Durham, *Sociology of social policy*, MA  
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 47.75 Hull, *Sociology of developing societies*, MA  
 47.76 Kent, *Sociology*, MA  
 47.77 Kent, *Women's studies*, MA/Diploma  
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 47.81 Leeds, *Political sociology of development*, MA  
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 47.95 Poly of North London, *Sociology and social policy*, MA (CNA)  
 47.96 Salford, *Society and culture*, MA  
 47.97 Salford, *Sociology*, MSc  
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theory, the family, women's studies, ethnographic studies. Contact Dr DHJ Morgan

47:30 Newcastle, *Social studies*, MA/PhD

47:31 NE London Poly, *Sociology*, MPhil/PhD (CNAAC)

47:32 N Staffs Poly, *Sociology*, MPhil/PhD (CNAAC)

47:33 Nottingham, *Sociology*, MPhil/PhD

47:34 Open, *Sociology*, BPhil/MPhil/PhD

47:35 Oxford, *Race relations*, MLitt/DPhil

47:36 Oxford, *Socio-legal studies*, MLitt/DPhil

47:37 Oxford, *Sociology*, MLitt/DPhil

47:38 Plymouth Poly, *Social and political studies*, MPhil/PhD (CNAAC)

47:39 Poly of Central London, *Sociology and applied social studies*, MPhil/PhD (CNAAC)

47:40 Poly of North London, *Sociology*, MPhil/PhD (CNAAC)

47:41 Reading, *Sociology*, MPhil/PhD

47:42 Salford, *Sociology and anthropology*, MA/MSc/PhD

47:43 Sheffield, *Sociological studies*, MPhil/PhD

47:44 Southampton, *Sociology and social administration*, MPhil/PhD; supervision available, recent staff research interests inc: sociol of industry and business organisation inc work and influence of Elton Mayo, effects of intro of new technologies on work and organisation, technology and class structure, business organisation and ideologies; theory and development of social policy inc comparative social policy esp relating to USA and W Germany; medical sociol inc informal social networks of psychiatric patients and ways in which social relationships may change as result of psychiatric illness; English intelligentsia since 1832, patterns of hist change, distinctiveness of European states; sociol of family and friendship, ways in which family and domestic life is shaped by wider social factors, roles of informal relationships in integrating individual into society; penal and health policy inc protection of people in various forms of public care, private medicine in UK, mothers' attitudes to health visitors; rural sociol: family farming and agricultural policies in terms of Max Weber's theory of social change. Contact Dr J Hall

47:45 Stirling, *Sociology*, MSc/PhD; supervision available in interdisciplinary research in sociol, social anthropology, social admin and social work, esp comparative social research, industrial relations and applied social research; current applied research concentrated in: family violence, job creation and unemployment, health and social services for elderly, development and delivery of child care services, organisation and effectiveness of state and voluntary welfare services, ethnic relations, trade union leadership, profit sharing, comparative emphasis involving different countries in EC, Scandinavia and N America; other current comparative research primarily in field of sociol of development with fieldwork concentrated in Japan, Kenya, Tanzania, Algeria and Middle E. Contact Professor DWG Timms

47:46 Strathclyde, *Sociology*, MPhil/PhD

47:47 Surrey, *Sociology*, MPhil/PhD

47:48 Sussex, *Sociological studies*, MPhil/DPhil

47:49 Teesside Poly, *Sociology*, MPhil/PhD (CNAAC)

47:50 Thames Poly, *Sociology*, MPhil/PhD (CNAAC)

47:51 Ulster, *Sociology and social anthropology*, MPhil/DPhil

47:52 Wales (Aberystwyth), *Sociology*, MSc(Econ)/PhD

47:53 Wales (Bangor), *Sociology and social administration*, MA/PhD

47:54 Wales (Cardiff), *Sociology*, MScEcon/PhD

47:55 Wales (Swansea), *Sociology and anthropology*, MSc(Econ)/PhD

47:56 Warwick, *Sociology*, MPhil/PhD

47:57 York, *Communication studies*, MPhil/DPhil

47:58 York, *Sociology*, MPhil/DPhil

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

47:59 Birmingham, *Race and education*, MSocSc

47:60 Birmingham, *Socio-legal studies*, MSocSc





health care, sociol of NHS; dissertation. Contact Dr M David, Head of Department

47:102 Strathclyde, *Sociology of development and human resources*, MSc

47:103 Sussex, *Sociology*, MA

47:104 Sussex, *Women and education*, MA

47:105 Warwick, *Comparative labour studies*, MA/Diploma

47:106 Warwick, *Sociological research in health care*, MA/Diploma

47:107 Warwick, *Sociology of education*, MA/Diploma

47:108 Warwick, *Sociology of labour*, MA/Diploma

47:109 Warwick, *Women's studies*, MA

47:110 West Midlands CHE (Walsall), *Social change and social education*, MEd (CNA)

47:111 York, *Sociology of contemporary culture*, MA

47:112 York, *Women's studies*, MA

## Certificates and diplomas

47:113 Belfast, *Sociology*, Diploma

47:114 Birmingham, *Socio-legal studies*, Diploma

47:115 Bristol, *Social sciences (sociology)*, Diploma

47:116 Bristol, *Sociology*, Diploma

47:117 East Anglia, *Social institutions of industrial societies*, Diploma

47:118 East Anglia, *Sociology*, Diploma

47:119 Essex, *Sociology*, Certificate

47:120 Glasgow, *Sociology*, Diploma

47:121 Kent, *Sociology*, Diploma

47:122 Lancaster, *Race relations*, Diploma

47:123 Lancaster, *Social analysis*, Diploma

47:124 London (Goldsmiths'), *Women's studies in education*, Diploma

47:125 London (Inst Ed), *Human rights and education*, Diploma

47:126 London (LSE), *Sociology*, Diploma

47:127 Manchester, *Sociology*, Diploma

47:128 Reading, *General sociology*, Diploma

47:129 Salford, *Sociology*, Advanced Certificate

47:130 Wales (Aberystwyth), *Sociology*, Diploma

47:131 West Midlands CHE (Walsall), *Teaching in the multi-ethnic school*, Diploma (CNA)

## THE UNIVERSITY OF HULL

### Sociology, Anthropology & Development Studies

**MA. Sociology of Developing Societies** One year full time (2 years part time) taught courses cover development issues, research methods and special topics in relation to the Middle East, Tropical Africa, South East Asia and Latin America

#### **MPhil/PhD by Research**

Students initially take a taught course in the planning and conduct of research, and subsequently participate in regular research workshops.

Subjects in which supervision is available currently include sociological/anthropological studies in developing areas, including the Middle East, Tropical Africa, South East Asia and parts of Latin America

Also available is supervision in Industrial development, the sociology of education, the family, war and peace, women's studies, social theory and political and social anthropology

Details from:

Dr Norman O'Neill, Department of Sociology & Social Anthropology, University of Hull, Hull HU6 7RX, North Humberside, England

## DEPARTMENT OF SOCIOLOGY: HIGHER DEGREES BY RESEARCH OR EXAMINATION

### University of Reading

**MPhil/PhD** Supervision available over a wide range of subjects. Major interests include **INTERNAL SECURITY** (Crime, police, terrorism, public order) and **BELIEF SYSTEMS** (Ideology, humour, folklore)

**MA** The Department also offers courses leading to an MA in European Studies or an MA in International Studies within the Faculty's inter-disciplinary Graduate School. Bureaucracy and Society in E Europe, Comparative Criminology, Europe and the Islamic World, Mediterranean Peasant Societies, Social Control in Comparative Perspective, Socialism and Socialist Democracy in Europe, Terrorism and Political Crime

**Contact:** Dr K B Robertson  
Department of Sociology, University of Reading, Whiteknights, Reading RG6 2AA

## BIRKBECK COLLEGE

University of London

### DEPARTMENT OF POLITICS & SOCIOLOGY

#### MASTERS DEGREES in POLITICS & SOCIOLOGY, and POLITICS & ADMINISTRATION

One year full time, two years part time. All formal teaching takes place in the evenings. Normally applicants will have a good first degree in a relevant subject or subjects

##### **MSc Politics & Sociology**

Compulsory courses in Political Theory and Political Sociology plus two options

##### **MSc Politics & Administration**

Compulsory courses in Modern British Politics and Policy and Administration plus two options

Options include American Politics and Society, Western

European Politics and Society, International Relations

and Development Studies, Social Theory and Methods

of Social Science, Social Research Methods, Social

Policy and Planning, Social and Political Thought

and Theory, Social and Political Theory, Social

and Political Theory, Social and Political Theory

and Political Theory, Social and Political Theory

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and Political Theory, Social and Political Theory

and Political Theory, Social and Political Theory

and Political Theory, Social and Political Theory

**Consult**  
an  
institution's  
official  
prospectus  
before  
applying

Applications as early in the year as possible to Admissions Officer, Department of Politics & Sociology, Birkbeck College, Malet Street, London WC1E 7HX. Tel: 01 631 6542

health care, sociol of NHS; dissertation. Contact Dr M David, Head of Department

47:102 **Strathclyde**, *Sociology of development and human resources*, MSc

47:103 **Sussex**, *Sociology*, MA

47:104 **Sussex**, *Women and education*, MA

47:105 **Warwick**, *Comparative labour studies*, MA/Diploma

47:106 **Warwick**, *Sociological research in health care*, MA/Diploma

47:107 **Warwick**, *Sociology of education*, MA/Diploma

47:108 **Warwick**, *Sociology of labour*, MA/Diploma

47:109 **Warwick**, *Women's studies*, MA

47:110 **West Midlands CHE (Walsall)**, *Social change and social education*, MEd (CNA)

47:111 **York**, *Sociology of contemporary culture*, MA

47:112 **York**, *Women's studies*, MA

## Certificates and diplomas

47:113 **Belfast**, *Sociology*, Diploma

47:114 **Birmingham**, *Socio-legal studies*, Diploma

47:115 **Bristol**, *Social sciences (sociology)*, Diploma

47:116 **Bristol**, *Sociology*, Diploma

47:117 **East Anglia**, *Social institutions of industrial societies*, Diploma

47:118 **East Anglia**, *Sociology*, Diploma

47:119 **Essex**, *Sociology*, Certificate

47:120 **Glasgow**, *Sociology*, Diploma

47:121 **Kent**, *Sociology*, Diploma

47:122 **Lancaster**, *Race relations*, Diploma

47:123 **Lancaster**, *Social analysis*, Diploma

47:124 **London (Goldsmiths')**, *Women's studies in education*, Diploma

47:125 **London (Inst Ed)**, *Human rights and education*, Diploma

47:126 **London (LSE)**, *Sociology*, Diploma

47:127 **Manchester**, *Sociology*, Diploma

47:128 **Reading**, *General sociology*, Diploma

47:129 **Salford**, *Sociology*, Advanced Certificate

47:130 **Wales (Aberystwyth)**, *Sociology*, Diploma

47:131 **West Midlands CHE (Walsall)**, *Teaching in the multi-ethnic school*, Diploma (CNA)

## THE UNIVERSITY OF HULL

### Sociology, Anthropology & Development Studies

America

MPhil/PhD by Research

Students initially take a taught course in the planning and conduct of research, and subsequently participate in regular research workshops

Subjects in which supervision is available currently include sociological/anthropological studies in developing areas, including the Middle East, Tropical Africa, South East Asia and parts of Latin America

Also available is supervision in industrial development, the sociology of education, the family, war and peace, women's studies, social theory and political and social anthropology

Details from:

Dr Norman O'Neill, Department of Sociology & Social Anthropology, University of Hull, Hull HU6 7RX, North Humberside, England

## DEPARTMENT OF SOCIOLOGY: HIGHER DEGREES BY RESEARCH OR EXAMINATION

### University of Reading

**MPhil/PhD** Supervision available over a wide range of subjects. Major interests include **INTERNAL SECURITY** (Crime, police, terrorism, public order) and **BELIEF SYSTEMS** (Ideology, humour, folklore)

**MA** The Department also offers courses leading to an MA in European Studies or an MA in International Studies within the Faculty's inter-disciplinary Graduate School. **Bureaucracy and Society in E Europe**, **Comparative Criminology: Europe and the Islamic World**, **Mediterranean Peasant Societies**, **Social Control in Comparative Perspective**, **Socialism and Socialist Democracy in Europe**, **Terrorism and Political Crime**

**Contact** Dr K B Robertson  
Department of Sociology, University of  
Reading, Whiteknights, Reading RG6 2AA

## BIRKBECK COLLEGE

University of London

### DEPARTMENT OF POLITICS & SOCIOLOGY

#### MASTERS DEGREES in POLITICS & SOCIOLOGY, and POLITICS & ADMINISTRATION

One year full time, two years part time. All formal teaching takes place in the evenings. Normally applicants will have a good first degree in a relevant subject or subjects

#### MSc Politics & Sociology

Compulsory courses in Political Theory and Political Sociology plus two options

#### MSc Politics & Administration

Compulsory courses in Modern British Politics and Policy and Administration plus two options

#### Options include:

... ..

Applications, as early in the year as possible to Admissions Officer, Department of Politics & Sociology, Birkbeck College, 8-11 Gower Street, London WC1E 7HX. Tel: 01 631 6542

# Consult

an  
institution's  
official  
prospectus  
before  
applying

## 48 Theology and religious studies

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 48:1 **Aberdeen**, *Christianity in the non-Western world*, MTh/MLitt/PhD
- 48:2 **Aberdeen**, *Divinity*, MTh/PhD
- 48:3 **Belfast**, *Theology*, PhD
- 48:4 **Birmingham**, *Theology*, MA/MLitt/BD/PhD
- 48:5 **Brighton Poly**, *Religious studies*, MPhil/PhD (CNA)
- 48:6 **Bristol**, *Theology*, MA/MLitt/PhD
- 48:7 **Cambridge**, *Divinity*, MLitt/PhD
- 48:8 **Cambridge**, *Oriental studies*, MLitt/PhD
- 48:9 **Durham**, *Divinity*, MA/MLitt/PhD
- 48:10 **Edinburgh**, *Ecclesiastical history*, MPhil/PhD
- 48:11 **Edinburgh**, *Theology*, MPhil/MTh/PhD
- 48:12 **Exeter**, *Theology*, MPhil/PhD
- 48:13 **Glasgow**, *Religious studies*, MLitt/PhD
- 48:14 **Glasgow**, *Theology*, MTh/PhD
- 48:15 **Hull**, *Theology*, MTh/MPhil/PhD
- 48:16 **Kent**, *Theology*, MA/PhD
- 48:17 **Lancaster**, *Religious studies*, MPhil/PhD
- 48:18 **Leeds**, *Theology and religious studies*, MA/MPhil/PhD
- 48:19 **Leicester**, *Study of religion*, MA/MPhil/PhD
- 48:20 **London (Jews')**, *Jewish studies*, MPhil/PhD
- 48:21 **London (KQC)**, *Ecclesiastical history*, MPhil/PhD
- 48:22 **London (KQC)**, *Religious studies*, MPhil/PhD
- 48:23 **London (KQC)**, *Theology*, MPhil/PhD
- 48:24 **London (UC)**, *Hebrew and Jewish studies*, MPhil/PhD
- 48:25 **Manchester**, *Biblical criticism and exegesis*, MPhil/PhD
- 48:26 **Manchester**, *Comparative religion*, MPhil/PhD
- 48:27 **Manchester**, *Philosophy of religion*, MPhil/PhD
- 48:28 **Manchester**, *Theological studies*, MPhil/PhD
- 48:29 **Newcastle**, *Religious studies*, MLitt/PhD
- 48:30 **Nottingham**, *Theology*, MPhil/PhD; supervision available for research; specific staff interests: phil of religion with sp interests in thought of Kierkegaard and Tillich and in German idealism of 19th cent; systematic theology esp 19th- and 20th-cent German theology; social anthropology of religion, sectarian religion, pastoral theology; 2nd Temple Judaism and origins of Christianity; New Testament esp Synoptic Problem, textual criticism, lit criticism and doctrinal development from Paul; hist theology in patristic period with sp interests in theological debates from 5th to 9th cent; Islamic studies esp relationship between Islam and Christianity. Contact Dr JB Muddiman
- 48:31 **Open**, *Religious studies*, BPhil/MPhil/PhD
- 48:32 **Oxford**, *Theology*, MLitt/DPhil
- 48:33 **St Andrews**, *Divinity*, MPhil/PhD
- 48:34 **St Paul & St Mary's C**, *Theology and religious studies*, MPhil/PhD (CNA)
- 48:35 **Sheffield**, *Biblical studies*, MPhil/PhD
- 48:36 **Southampton**, *Theological and religious studies*, MPhil/PhD
- 48:37 **Stirling**, *Religious studies*, MLitt/PhD

- 48 38 **Sussex, Religious studies**, MPhil/DPhil  
 48 39 **Sussex, Religious studies**, MPhil/DPhil  
 48 40 **Sussex, Religious studies**, MPhil/DPhil  
 48 41 **Sussex, Religious studies**, MPhil/DPhil  
 48 42 **Sussex, Religious studies**, MPhil/DPhil  
 48 43 **Wales (Lampeter), Theology and religious studies**, MA/PhD

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

- 48 44 **Aberdeen, Biblical studies**, MTh  
 48 45 **Aberdeen, Christianity in the non-Western world**, MTh  
 48 46 **Belfast, Theology**, MTh  
 48 47 **Birmingham, Studies in religion and culture**, MA  
 48 48 **Birmingham, Textual criticism of the New Testament**, MA  
 48 49 **Birmingham, Theology**, BD  
 48 50 **Bristol, Political theology**, MA  
 48 51 **Bristol, Problems of Biblical interpretation in modern study**, MA  
 48 52 **Bristol, Religion and mythology in the ancient world**, MA  
 48 53 **Bristol, Religious studies**, MA  
 48 54 **Bristol, Victorian studies (to 1914)**, MA  
 48 55 **Cambridge, Theology**, MPhil/Diploma  
 48 56 **Cambridge, Theology**, MPhil/Diploma  
 48 57  
 48 58  
 48 59  
 48 60 **Exeter, Theology**, MA  
 48 61 **Exeter, Theology**, MA  
 48 62 **Exeter, Theology**, MA  
 48 63 **Exeter, Theology**, MA  
 48 64 **Exeter, Theology**, MA  
 48 65 **Lancaster, Sociology of religion**, MA  
 48 66 **Leeds, Religious studies**, MA  
 48 67 **Leeds, Theology**, MA  
 48 68 **Liverpool, Theology**, MA  
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 48 77 **Manchester, Social and pastoral theology**, MA(Theol)/Diploma

- 48:78 Manchester, *Theology*, BD
- 48:79 Nottingham, *Theology*, MTh
- 48:80 Oxford, *Eastern Christian studies*, MPhil
- 48:81 Oxford, *Jewish studies in the Graeco-Roman period*, MPhil/MSt
- 48:82 Oxford, *Modern Jewish studies*, MPhil/MSt
- 48:83 Oxford, *Syriac studies*, MSt
- 48:84 Oxford, *Theology*, MPhil/MSt
- 48:85 St Andrews, *Divinity*, MPhil
- 48:86 S Martin's C (Lancaster), *Religious education*, MA (Lancaster)
- 48:87 Sheffield, *Biblical studies*, MA
- 48:88 Sussex, *Religious studies*, MA
- 48:89 Ulster, *Ethics and philosophy of religion*, MA/Diploma
- 48:90 Wales (Aberystwyth), *Ancient philosophy and religion*, MA
- 48:91 Wales (Bangor), *Biblical studies*, MA
- 48:92 Wales (Bangor), *Theology*, MTh
- 48:93 Wales (Cardiff), *Pastoral studies*, MTh/Diploma
- 48:94 Wales (Cardiff), *Study of religions*, MA
- 48:95 Wales (Cardiff), *Theology*, MTh
- 48:96 Wales (Lampeter), *Philosophy*, MA
- 48:97 Wales (Lampeter), *Religion and ethics in Western thought*, MA
- 48:98 West Sussex IHE (Bognor Regis), *Religious studies*, MPhil (CNAA)

## Certificates and diplomas

- 48:99 Birmingham, *Liturgy and architecture*, Diploma
- 48:100 Birmingham, *Pastoral studies*, Diploma
- 48:101 Birmingham, *Theology*, Diploma
- 48:102 Bristol, *Theology*, Diploma
- 48:103 Christ Church C (Canterbury), *Religious education*, Diploma (Kent)
- 48:104 Edinburgh, *Christian education*, Diploma
- 48:105 Exeter, *Theology*, Diploma
- 48:106 King Alfred's C (Winchester), *Religious studies*, Certificate
- 48:107 Lancaster, *Religious studies*, Diploma
- 48:108 Liverpool IHE, *Religious education*, Diploma
- 48:109 London (Jews'), *Jewish studies*, Diploma
- 48:110 Newcastle, *Religious studies*, Diploma
- 48:111 Nottingham, *Theology*, Diploma
- 48:112 Oxford, *Theology*, Diploma
- 48:113 St Andrews, *Church music*, Diploma
- 48:114 St Andrews, *Pastoral theology*, Diploma
- 48:115 St Mary's C (Strawberry Hill), *Religious education*, Diploma (Surrey)
- 48:116 Stirling, *Religious studies*, Certificate
- 48:117 Strathclyde, *Religious education*, Certificate

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## **Research facilities and courses:**

### **II Biological, health and agricultural sciences**

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For institution addresses and further information sources, see the 'Institutions' section, starting on page 479



## 49 Agriculture: general

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 49:1** Aberdeen, *Agriculture*, MSc/PhD
- 49:2** Belfast, *Crop and animal production*, MAgr/MSc/PhD
- 49:3** Bristol, *Agriculture and horticulture*, MSc/PhD
- 49:4** Edinburgh, *Agriculture*, MSc/PhD
- 49:5** Glasgow, *Agriculture*, MSc/PhD
- 49:6** London (Wye), *Agriculture*, MPhil/PhD *See page 239*
- 49:7** Newcastle, *Agriculture*, MSc/PhD
- 49:8** Nottingham, *Agriculture and horticulture*, MPhil/PhD
- 49:9** Reading, *Agricultural extension and rural development*, MPhil/PhD
- 49:10** Reading, *Agricultural history*, MPhil/PhD
- 49:11** Reading, *Agriculture*, MPhil/PhD
- 49:12** Southampton, *Biology*, MPhil/PhD
- 49:13** Wales (Aberystwyth), *Agriculture*, MSc/PhD
- 49:14** Wales (Bangor), *Agriculture*, MSc/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 49:15** East Anglia, *Agricultural research and development*, MSc, 1c yr f-t (relevant deg normally req); experienced agriculturalists and agricultural scientists from industrialised countries who intend to work in developing countries considered; training relevant to developing country problems and opportunities, enables participants to work effectively within agricultural development programmes, training in principles of agricultural research and development in tropics and sub-tropics and in techniques needed to solve development problems; *course content*: agricultural research and extension, agricultural experimentation, political economy of agrarian change, land resource assessment, agricultural policy and planning, resource management, agricultural development research; dissertation.
- 49:16** Reading, *Agricultural extension*, MSc/Diploma
- 49:17** Reading, *Rural social development*, MSc/Diploma
- 49:18** Reading, *Tropical agricultural development*, MSc/MAgrSc/Diploma

### Certificates and diplomas

- 49:19** Belfast, *Agricultural communication*, Diploma
- 49:20** London (Wye), *Agricultural development*, Diploma
- 49:21** Reading, *Agricultural education*, Diploma, 1 yr f-t; *course content*: farming systems, designing curricula, teaching in agriculture. Contact Miss A McCord, Assistant Registrar & Secretary

Degrees MPhil/PhD/MSc or Diploma

Length of courses 1 year MSc/Diploma 2 years MPhil

3 years PhD

No of places Approximately 150 (70 research and

80 MSc/Diploma)

Description of courses Wye College is the School of  
Agriculture and Horticulture in the Faculty of Science of

development overseas farm business management  
marketing agricultural policy) landscape ecology  
design and maintenance tropical and sub-tropical  
horticulture and crop science rural resources and  
environmental policy conservation of soil fertility  
Diploma after one academic year in agricultural  
development

Entrance requirements Normally a second-class honours

## University of Edinburgh

### THE EDINBURGH SCHOOL OF AGRICULTURE

The School of Agriculture at Edinburgh which for many years has been engaged in agricultural education and maintains a substantial programme of applied research in agriculture offers the following MSc courses which are open to graduates in agriculture biological science or veterinary medicine

**MSc Seed Technology** This course is aimed at personnel with a degree in agriculture/horticulture or an appropriate biological science who intend to take up technical and managerial positions in seed industries in the UK or overseas

**MSc Animal Breeding** This course aims to impart the basic knowledge and skills including data analysis necessary to direct animal breeding programmes or to undertake research. It is open to honours graduates in agricultural or biological science or to those with a suitable qualification in veterinary medicine

**MSc Tropical Animal Production and Health** This course follows a multi-disciplinary approach to provide planners and managers of livestock development projects in the tropics with a broad knowledge of animal production and health

Courses run from October to the end of September. A final examination is held in June on completion of the taught component of the course. Thereafter successful candidates proceed to the preparation of a dissertation for submission by 30 September graduation takes place in November. All of the courses are concerned in part with agricultural improvement in developing countries

Enquiries concerning course content and the availability of studentships should be made in the first instance to - The Teaching Secretariat, Edinburgh School of Agriculture, 100 West Main Road, Edinburgh EH19 3JG

**School of Agriculture  
University of Aberdeen  
and  
North of Scotland College of  
Agriculture**

Postgraduate taught courses are offered in the following subjects

MSc	Agricultural Economics	(12 or 24 months)
	Animal Nutrition	(12 months)
	Animal Production	(12-15 months)
	Pig Production	(12 months)
	Crop Science	(12-24 months)
Diploma	Agricultural Economics	(9 months)
	Agricultural Business Management	(9 months)
	Animal Nutrition	(9 months)

MSc courses include a small research project or special assignment. Opportunities also exist for obtaining MSc and PhD degrees by research.

The School of Agriculture combines the University Department of Agriculture and the North of Scotland College of Agriculture. Its 150 graduate staff are involved in teaching (diploma, degree and postgraduate), research and development work (on three College farms and also on commercial farms), and farm advisory work (throughout the North of Scotland). The School has close associations with agricultural research institutes in the Aberdeen area and in other parts of Scotland. There are usually about 60 postgraduate students in the School, half from overseas.

Particulars of the above courses may be obtained from

School of Agriculture (Room G05)

581 King Street, Aberdeen, Scotland AB9 1UD

**More  
information  
is in the parent  
edition  
  
Graduate  
Studies  
at your careers  
service**

University of Reading, UK

Over ninety years in the service of World Agricultural & Food Production

**FACULTY OF AGRICULTURE & FOOD**

*Masters Degrees and Diplomas*

Postgraduate Courses (one or two years)

- Agricultural Economics MSc & Diploma ■ Agricultural Management MSc ■ Animal Production MSc & Diploma ■ Crop Physiology MSc
- Food & Agricultural Biotechnology MSc ■ Food Process Engineering MSc ■ Food Science MSc ■ Food Technology MSc ■ Grassland Science MSc ■ Soil Science MSc ■ Technology of Crop Protection MSc ■ Tropical Agricultural Development Diploma, MSc & MAgSc

*Other Courses*

PhD (not less than 3 years) or MPhil (not less than 2 years)

Higher degrees by research available in all the above areas and most other aspects of Agriculture.

Short Courses (1 week to 6 months)

A range of short courses is available in Veterinary Epidemiology, Statistical Methods, Rodent Control, Soil and Plant Analysis and the Use of Computers in Livestock Development.

Courses in English available at the University.

Enquiries concerning these courses should be addressed to: The Assistant Registrar, Faculty of Agriculture and Food (C/D), No 2, Earley Gate, University of Reading, Whiteknights Road, Reading RG6 2AU, England, UK.  
Telephone (0734) 875123 Ext 6388 Telex 847813

# 50 Agriculture: biology, botany, crop and plant science

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

50 1 Aberdeen, Agriculture, MSc/PhD

50 2 Bath, Crop protection, MSc/PhD

50 3 Bath, Plant sciences, MSc/PhD

50 4 Birmingham, Agriculture, MSc/PhD

50 5 Birmingham, Crop protection, MSc/PhD

50 6 Birmingham, Plant sciences, MSc/PhD

50 7 Birmingham, Crop protection, MSc/PhD

50 8 Birmingham, Plant sciences, MSc/PhD

50 9 Leeds, Plant sciences, MPhil/PhD

50 10 Leeds, Crop protection, MSc/PhD

50 11 Leeds, Plant sciences, MSc/PhD

50 12 Leeds, Crop protection, MSc/PhD

50 13 Leeds, Plant sciences, MSc/PhD

50 14 Leeds, Crop protection, MSc/PhD

50 15 Leeds, Plant sciences, MSc/PhD

*Vicia* cytogenetics and evolution of *Capsicum* taxonomy of cultivated plants, crop physiol and biochem chem regulation of growth patterns in cereals, physiol aspects of watercress production, physiol of herbicide activity, cellular accumulation of storage cpds in crops, ethylene biosynthesis, crop and weed ecology ecology of annual grass weeds, crop weed competition, grass legume interactions in pastures, ecological genetics of pasture spp and weeds, mixed cropping population biol of weeds, temp, radiation and crop growth, factors affecting leaf growth, climatic determinants of

50 16 Leeds, Crop protection, MSc/PhD

50 17 Leeds, Plant sciences, MSc/PhD

50 18 Leeds, Crop protection, MSc/PhD

50 19 Wales (Bangor), Plant biology, MSc/PhD, supervision available, current research interests inc plant architecture, carbon in plant growth, physiol of plants infected with fungi, effects of breeding

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 50:20** Aberdeen, *Crop science*, MSc
- 50:21** Cambridge, *Plant breeding*, MPhil
- 50:22** Cranfield (Silsoe), *Crop storage and processing technology*, MSc/Diploma
- 50:23** Cranfield (Silsoe), *Tropical crop storage and processing*, MSc/Diploma
- 50:24** Edinburgh, *Seed technology*, MSc/Diploma
- 50:25** London (Imperial), *Plant pathology*, MSc/DIC
- 50:26** London (Imperial), *Weed science*, MSc/DIC
- 50:27** London (Wye), *Applied plant sciences*, MSc
- 50:28** London (Wye), *Tropical and sub-tropical horticulture and crop science*, MSc
- 50:29** Nottingham, *Agronomy*, MSc
- 50:30** Reading, *Crop physiology*, MSc, 1c yr f-t; study of physiol of growth and development of whole plants, esp when growing in crop conditions, emphasis on aspects of physiol research that lead to understanding of growth of crops; *course inc:* germination and seedling estab; morphological bases of vegetative and reproductive growth patterns; measurement, analyses and correlations of growth measurements; developmental physiol and growth patterns; chem regulation of growth; biochem synthesis of major crop storage substances; climate and crop growth; soil conditions and water relations and mineral nutrition of crops; accumulation and translocation of reserve materials; flowering and seed and fruit formation; visits to research stations, intro course in computer programming available; exam and report on guided investigation. Contact Dr RW Snaydon
- 50:31** Reading, *Food and agricultural biotechnology*, MSc
- 50:32** Reading, *Grassland science*, MSc
- 50:33** Reading, *Technology of crop protection*, MSc
- 50:34** Southampton, *Tropical and sub-tropical crops research*, MSc/Diploma
- 50:35** Wales (Aberystwyth), *Agronomy of agricultural and amenity grassland*, MSc
- 50:36** Wales (Aberystwyth), *Cell and molecular genetics of crop plants*, MSc
- 50:37** Wales (Aberystwyth), *Improvement and renovation of grassland*, MSc
- 50:38** Wales (Aberystwyth), *Plant breeding*, MSc
- 50:39** Wales (Aberystwyth), *Plant disease management*, MSc
- 50:40** Wales (Aberystwyth), *Symbiotic nitrogen fixation*, MSc
- 50:41** Wales (Bangor), *Crop protection*, MSc/Diploma

## Certificates and diplomas

- 50:42** Harper Adams AgC, *Crop protection*, Diploma (CNAA), 1 yr f-t (deg in agriculture or science req, or other approved qual with approp experience); training for employment in agrochem, advisory and teaching organisations; *syllabus:* soil science; agronomy of British crops; biol, bionomics and epidemiology of pests, weeds and diseases; control of pests, weeds and diseases in cropping systems; chem and mode of action of pesticides; mechanisation of crop protection measures; safety precautions and side effects of pesticides; design and analysis of field expts; College's farm is regional trial centre for National Inst of Agricultural Botany; close contact with crop protection industries and research centres made by seminars and visits to research estabs, exptl farms and commercial organisations; continuous assessment and exam; course and exam give exemption from reqs of British Agrochemical Supply Industries Scheme following practical experience. Contact RJ Jopling

## University College of Wales, Aberystwyth

### Department of Agricultural Botany PhD, MSc, Diploma

#### MSc/PhD by research

Main fields of study: genetics, cytology and plant breeding, plant pathology, soil microbiology, agronomy, crop physiology

#### MSc/Diploma by instruction

**2 year MSc programme** Plant breeding, this involves course work and a major research project normally undertaken at the Welsh Plant Breeding Station

**1 year MSc programmes** Cell and molecular genetics of crop plants, symbiotic nitrogen fixation, disease management, agronomy of agricultural and amenity grassland

**1 year postgraduate courses** leading to the University Diploma in Agricultural Science can be provided in all the main areas of agricultural botany

#### Further information from

The Department of Agricultural Botany,  
University College of Wales, Penglais,  
Aberystwyth, Dyfed SY23 3DD, UK.

## UNIVERSITY of SALFORD

### DEPARTMENT OF BIOLOGICAL SCIENCES

#### SEED TECHNOLOGY

Applications are invited from graduates in the biological and agricultural sciences for admission to a course of study leading to the degree of MSc or to a Diploma in Seed Technology. The course involves lectures/tutorials and practical work and also an extended research project and will benefit persons intending to make a career in the seed industry or agriculture, and also biologists wishing to carry out research in seed physiology.

The course occupies one year and is arranged in a modular form. Successful applicants are therefore

able to begin their studies on

**1st October, 1st January, or 1st April**  
in any year

Supervision is also available for the degrees of MSc and PhD by research in seed biology. English language tuition is available within the University.

Enquiries and applications should be sent to  
The Seed Technology Unit,  
Biological Sciences, University of Salford,  
Manchester M5 4WT, UK.

# 51 Agriculture: economics and management

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 51:1 Belfast, *Agricultural economics*, MAgr/PhD
- 51:2 Edinburgh, *Agricultural economics*, MPhil/PhD
- 51:3 Exeter, *Economics*, MPhil/PhD
- 51:4 Glasgow, *Agricultural economics*, MLitt/PhD
- 51:5 London (Wye), *Agricultural economics*, MPhil/PhD
- 51:6 Manchester, *Agricultural economics*, MA(Econ)/PhD
- 51:7 Newcastle, *Agricultural economics*, MSc/PhD
- 51:8 Newcastle, *Agricultural and food marketing*, MSc/PhD
- 51:9 Nottingham, *Economics*, MPhil/PhD
- 51:10 Reading, *Agricultural economics and management*, MPhil/PhD
- 51:11 Wales (Aberystwyth), *Agricultural economics*, MSc/PhD *See page 246*
- 51:12 Wales (Bangor), *Agricultural economics*, MSc/PhD

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 51:13 Aberdeen, *Agricultural economics*, MSc
- 51:14 Belfast, *Farm business economics*, MAgr
- 51:15 Cranfield (Silsoe), *Marketing and product management for agriculture and food*, MSc/Diploma
- 51:16 East Anglia, *Agricultural economics*, MSc, 1c yr f-t; training in theories and techniques relevant to agricultural planning and policy making in developing countries, sp attention to analysis of agricultural and rural development problems where employment and equity goals important; *course content*: agricultural economics theory, political economy of agrarian change, development economics, quantitative methods, project appraisal, agricultural development planning, applied agricultural economics, rural development planning; assessment of coursework, exams, dissertation.
- 51:17 London (Wye), *Agricultural economics*, MSc
- 51:18 London (Wye), *Rural resources and environmental policy*, MSc
- 51:19 Manchester, *Agricultural economics*, MA(Econ)
- 51:20 Oxford, *Agricultural economics*, MSc, 1c yr f-t; *coursework*: aspects of private and public decision making, policies, population, manpower, inst matters relating to agricultural and assoc industries in developed and developing countries, use of quantitative methods in agricultural economics; plus dissertation. Contact The Administrator
- 51:21 Reading, *Agricultural economics*, MSc
- 51:22 Reading, *Agricultural management*, MSc
- 51:23 Wales (Aberystwyth), *Agricultural and food marketing*, MSc *See page 246*
- 51:24 Wales (Aberystwyth), *Agricultural economics*, MSc/Diploma

## Certificates and diplomas

- 51 25 Aberdeen, *Agricultural economics*, Diploma
- 51 26 East Anglia, *Agricultural development economics*, Diploma
- 51 27 Manchester, *Agricultural economics*, Diploma
- 51 28 North Scotland CAg, *Farm business organisation and management*, Diploma
- 51 29 Reading, *Agricultural economics*, Diploma
- 51 30 Seale Hayne C, *Farm management*, Diploma
- 51 31 Seale-Hayne C, *Management studies (agriculture)* DMS (CNA)

## UNIVERSITY OF READING

### Department of Agricultural Economics & Management



#### Taught Degrees

#### Master of Science Programmes (12 months including dissertation)

**MSc Agricultural Economics** covers economic theory, quantitative methods and agricultural economic problems and policies plus

**MSc Agricultural Management** is taught jointly with the Department of Agriculture through the Farm Management Unit and covers a wide range of aspects of management of agricultural businesses encountered in both the more and less developed parts of the world

#### Postgraduate Diploma in Agricultural Economics (9 months including extended essay)

This course covers principles of agricultural economics, statistics and research methods, development, marketing and policy. All four parts are examined and count with an extended essay towards the final result. A pass at a sufficiently high grade secures the right to proceed to the MSc course in Agricultural Economics.

#### Research Degrees

##### Master of Philosophy and Doctor of Philosophy Programmes

Suitably qualified candidates may pursue a Higher Degree by Research on a topic related to the broad field of agricultural and food economics, management and development. Examination is by thesis alone.

For application and further details write to Prof D R Harvey, Postgraduate Admissions Tutor, Dept of Agricultural Economics and Management, University of Reading, 4 Earley Gate, Whiteknights Road, PO Box 237, Reading RG6 2AR.



## Are you interested in the problems of rural development and engineering?

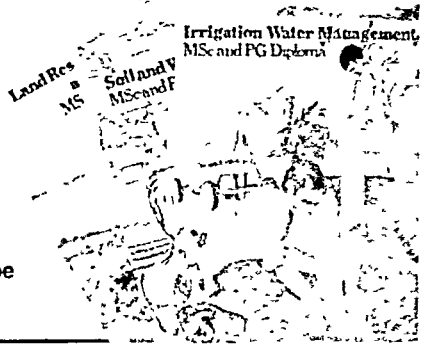
We could offer you an MSc or PG diploma in:

- ★ Soil & Water Engineering
- ★ Irrigation Water Management
- ★ Land Resource Management & Planning
- ★ Marketing & Product Management
- ★ Agricultural Machinery Engineering & Mechanization
- ★ Manufacturing for Agricultural & Industrial Development
- ★ Applied Remote Sensing
- ★ Tropical Crop Storage & Processing
- ★ Crop Storage & Processing Technology
- ★ Rural Engineering
- ★ Range Management
- ★ Soil Conservation
- ★ Irrigation Engineering
- ★ Land Drainage
- ★ Plantation Management

MAFF, NERC, ESRC, ODA, ODASSS, DTI and Silsoe College Awards available.

## Silsoe College

*A Faculty of the Cranfield Institute of Technology*  
 Student Recruitment Executive, Room 6, Silsoe  
 College, Silsoe, Bedford MK45 4DT.  
 Telephone: 0525 60428



## 53 Agriculture: forestry

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section*

53 1 **Aberdeen**, *Forestry*, MSc/PhD

fungal ecology and coniferous litter decomposition forest policy and taxation genetics tree breeding and applications of related biotechnological techniques such as tissue culture, micropropagation and protoplast fusion growth modelling in forests tree growth physiol and response to environmental inputs in fl flow in wood in relation to fundamentals of wood preservation physics of tree in relation to wind and snow damage management and silviculture of hardwood spp esp birch development control and inheritance of crown form influence of soil conditions on development of tree root systems **Contact** Dr WH Parry

53 2 **Edinburgh**, *Forestry and natural resources*, MPhil/PhD

53 3 **London (Imperial)**, *Plant science*, MPhil/PhD

53 4 **Oxford**, *Forestry*, MLitt/MSc/DPhil

53 5 **Wales (Bangor)**, *Forestry and wood science*, MSc/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses*

53 6 **Aberdeen**, *Forestry*, MSc/Diploma 1c yr f t (MSc) 9 mths f t (Diploma) (deg in forestry agricul ture ecology or equiv) both available in *forest mensuration and inventory forest business management and forest inventory and soil survey* with opportunity to study a range of postgrad modules being offered by various environmental science depts also Diploma in *forest resource studies* designed for forest managers from developing countries **Contact** Dr WH Parry

53 7 **Edinburgh**, *Forestry and natural resources*, MSc/Diploma

53 8 **Oxford**, *Forestry and its relation to land use*, MSc

53 9 **Wales (Bangor)**, *Environmental forestry*, MSc

53 10 **Wales (Bangor)**, *Forest industries technology*, MSc/Diploma

### Certificates and diplomas

53 11 **Buckinghamshire CHE**, *Timber studies*, Diploma

53 12 **Wales (Bangor)**, *Forestry*, Diploma

53 13 **Wales (Bangor)**, *Wood science*, Diploma

## 54 Agriculture: horticulture

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### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 54:1 Bath, Horticulture, MSc/PhD**
- 54:2 Bristol, Agriculture and horticulture, MSc/PhD**
- 54:3 London (Wye), Horticulture, MPhil/PhD**
- 54:4 Nottingham, Agriculture and horticulture, MPhil/PhD**
- 54:5 Reading, Horticulture, MPhil/PhD**

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 54:6 Bath, Crop production, MSc**
- 54:7 London (Wye), Tropical and sub-tropical horticulture and crop science, MSc**

## 55 Agriculture: sciences (including chemistry, biochemistry, physics etc)

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

- 55 1 *Abertaweek, Agricultural sciences* MSc/PhD  
 55 2 *Abertaweek, Agricultural sciences* MSc/PhD  
 55 3 *Abertaweek, Agricultural sciences* MSc/PhD  
 55 4 *Abertaweek, Agricultural sciences* MSc/PhD  
 55 5 Glasgow, *Agricultural chemistry* MSc/PhD  
 55 6 London (Wye), *Agricultural sciences* MPhil/PhD  
 55 7 *London (Wye), Agricultural sciences* MSc/PhD  
 55 8 *London (Wye), Agricultural sciences* MSc/PhD  
 55 9 *London (Wye), Agricultural sciences* MSc/PhD

sub-fertility in cattle hormonal control of mammary function in ruminants ovulation and puberty in domesticated farm animals mechanisms of amino acid transport into mammary cells neurophysiol of opioids gene structure and control of plant development seed proteins embryogenesis fruit ripening tomato genetics physiol of ABA deficient mutants gravitropism senescence seed germination plant hormones phytopathology antibiotics physiol of plant pathogen interactions environmental effects on plant diseases stomatal physiol photosynthesis water use growth and productivity of temperate and tropical crops plant breeding instrumentation for micrometeorology and crop ecology remote sensing of crop growth uptake of sulphur dioxide by crops, soil water relations and root function heavy metals in soil climatic physiol of livestock Contact Professor GE Lamming

- 55 10 *London (Imperial), Applied entomology* MSc/DIC  
 55 11 *London (Imperial), Applied entomology* MSc/DIC  
 55 12 *London (Imperial), Applied entomology* MSc/DIC

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses.

- 55 13 London (Imperial), *Applied entomology* MSc/DIC  
 55 14 London (Imperial), *Applied nematology* MSc/DIC  
 55 15 Reading, *Agricultural meteorology* MSc  
 55 16 Southampton, *Insect pest management*, MSc/Diploma  
 55 17 Wales (Aberystwyth), *Biochemistry and agricultural biochemistry*, MSc/Diploma

### Certificates and diplomas

- 55 18 Wales (Aberystwyth), *Agricultural science* Diploma  
 55 19 Wales (Bangor), *Agricultural science* Diploma

## 56 Agriculture: soil science

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section*

- 56:1 **Aberdeen**, *Soil science*, MSc/PhD  
 56:2 **Edinburgh**, *Soil science*, MPhil/PhD  
 56:3 **London (Wye)**, *Soil science*, MPhil/PhD  
 56:4 **Newcastle**, *Soil science*, MSc/PhD *See page 253*  
 56:5 **Oxford**, *Applied biology and soil science*, MLitt/MSc/DPhil  
 56:6 **Reading**, *Soil science*, MPhil/PhD *See page 253*  
 56:7 **Wales (Aberystwyth)**, *Soil science*, MSc/PhD  
 56:8 **Wales (Bangor)**, *Biochemistry and soil science*, MSc/PhD  
 56:9 **Wolverhampton Poly**, *Soil science*, MPhil/PhD (CNAA/various univs)

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

- 56:10 **Aberdeen**, *Soil science*, MSc/Diploma *See page 252*  
 56:11 **Cranfield (Silsoe)**, *Soil conservation*, MSc  
 56:12 **Newcastle**, *Soil science*, MSc *See page 253*  
 56:13 **Reading**, *Soil science*, MSc *See page 253*

### Certificates and diplomas

- 56:14 **Edinburgh**, *Rural science*, Diploma  
 56:15 **Wales (Aberystwyth)**, *Soil science*, Diploma

## Soil Science

## UNIVERSITY OF ABERDEEN

**Degree** Diploma in Soil Science

**Length of course** 9 months

**Degree** MSc in Soil Science

**Length of course** 12-24 months

**Degree** PhD (research)

**Length of course** 36 months

**Description of courses** The Diploma and MSc degrees include taught courses in one of the following five options but the MSc may include a research project and a dissertation

*Soil physics* incl aspects of crop environmental physics and soil mechanics

*Soil chemistry, fertility and management* incl aspects of crop

nutrition and field experimentation

*Soil microbiology* incl plant microbial interaction rhizosphere biology, and the modelling of organic matter decomposition

*Soil, plant and water analysis* incl analytical instrumentation

*Pedology, land use and soil survey* incl aspects of soil genesis, morphology and classification, and aerial photography

**Entrance requirements** For MSc and PhD, a good honours degree in a relevant subject, for the Diploma a pass degree or its equivalent in a relevant subject  
**Further information** The Department of Soil Science  
 University of Aberdeen, Aberdeen AB9 2UE

## University of Newcastle upon Tyne SOIL SCIENCE



**MSc by Advanced Course** This is a one year course for students with good honours degrees in Chemistry, Biochemistry, Geology, Physics, Geography, Agriculture, Agricultural or Environmental Science or other appropriate qualifications. (For those who do not meet the entrance

water and solutes through soil-plant-atmosphere continuum, moisture stress and unsaturated hydraulic conductivity, stabilisation of soil structure, recovery of soil structure after reworking, soil chemistry and fertility, carbonate minerals in soils, sulphate movement and retention in soils, phosphate chemistry in calcareous soils,

## University of Reading SOIL SCIENCE

**MSc Pedology and Soil Survey** One year taught course. One or two MAFF studentships available. Processes of soil formation, soil survey techniques and land development, irrigation, erosion and soil conservation, land use for engineering and recreational purposes.

**MSc Soil Chemistry and Fertility** One or two-year taught course. Chemistry and mineralogy of soil components, plant nutrients and fertiliser use, soil processes, problems of acid, alkaline, waterlogged soils.

**MSc Soil Water Management** One or two-year taught course. Water use by crops and behaviour of water in soil, management of water in rain fed and especially semi-arid regions, irrigation requirements, problems in saline and alkaline soils.

**MPhil/PhD** 2/3 year research degrees. Research

provided.

Informal visits to the department are welcome. Further information from: The Secretary, Department of Soil Science, University of Reading, London Road, Reading RG1 5AQ. Telephone 0734 875234.

# 57 Agriculture: zoology, animal science and husbandry

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 57:1 Aberdeen, Agriculture, MSc/PhD
- 57:2 Belfast, Agricultural zoology, MAg/MSc/PhD
- 57:3 Bristol, Animal husbandry, MSc/PhD
- 57:4 Edinburgh, Animal science, MPhil/PhD
- 57:5 Glasgow, Agricultural zoology, MSc/PhD
- 57:6 Glasgow, Animal husbandry, MSc/PhD
- 57:7 Glasgow, Dairy science, MSc/PhD
- 57:8 London (Wye), Animal biochemistry, MPhil/PhD
- 57:9 London (Wye), Animal physiology, MPhil/PhD
- 57:10 Newcastle, Agricultural biology, MSc/PhD
- 57:11 Nottingham, Physiology and environmental science, MPhil/PhD
- 57:12 Reading, Zoology, MPhil/PhD
- 57:13 Stirling, Aquaculture, MSc/PhD
- 57:14 Wales (Aberystwyth), Agriculture, MSc/PhD;
- 57:15 Wales (Bangor), Animal biology, MSc/PhD
- 57:16 West Scotland AgC, Poultry science, MSc/PhD (Glasgow)

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 57:17 Aberdeen, Animal nutrition, MSc
- 57:18 Aberdeen, Animal production, MSc
- 57:19 Edinburgh, Animal breeding, MSc/Diploma
- 57:20 Edinburgh, Animal health, MSc/Diploma
- 57:21 Edinburgh, Tropical animal production and health, MSc/Diploma
- 57:22 Glasgow, Poultry science, MSc/Diploma
- 57:23 London (Royal Veterinary), Animal health, MSc
- 57:24 Newcastle, Animal nutrition, MSc
- 57:25 Newcastle, Applied entomology, MSc
- 57:26 Reading, Animal production, MSc
- 57:27 Reading, Grassland science, MSc
- 57:28 Stirling, Aquaculture and fishery management, MSc/Diploma
- 57:29 Wales (Bangor), World animal production, MSc/Diploma, 1c yr f-t; provides working knowledge of systems of animal production throughout world and explanation of scientific bases of these systems; *topics inc:* forage production (temperate zone and irrigated areas); animal production (British and overseas systems); animal physiol and nutrition; environmental factors (eg effects of adverse environmental conditions on animal production, suitability of breeds for different climates); housing and mechanisation (inc accommodation for livestock under different environmental conditions, cultivation, sowing and harvesting machinery); livestock health (diseases, inc tropical diseases, and their control and treatment); plus dissertation. Contact Dr AG Chamberlain
- 57:30 West Scotland AgC, Poultry science, MSc (Glasgow)

## Certificates and diplomas

- 57 31 Aberdeen, *Animal nutrition*, Diploma
- 57 32 Reading, *Animal production*, Diploma
- 57 33 West Scotland AgC, *Poultry science*, Diploma (Glasgow)



## 58 Biological sciences: general studies (including biology)

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 58:1 Aston, *Molecular sciences*, MPhil/PhD;** projects offered in research gps: endocrinology and metabolism; diabetes, fish reproduction, immunoendocrinology; neurochem; brain metabolism, tetrahydrobiopterin and tetrahydrofolate biochem. Contact Dr GB Briscoe
- 58:2 Bolton IHE, *Biology*, MSc/PhD**
- 58:3 Bradford, *Environmental sciences*, MPhil/PhD**
- 58:4 Bristol Poly, *Biological sciences*, MPhil/PhD (CNAA)**
- 58:5 Brunel, *Applied biology*, MPhil/PhD**
- 58:6 Buckingham, *Biology*, MPhil/DPhil**
- 58:7 Cambridge, *Anatomy*, MSc/PhD**
- 58:8 Cambridge, *Applied biology*, MSc/PhD**
- 58:9 City of London Poly, *Biological sciences*, MPhil/PhD (CNAA)**
- 58:10 Coventry (Lanchester) Poly, *Biological sciences*, MPhil/PhD (CNAA/London)**
- 58:11 Derbyshire CHE (Derby), *Biological sciences*, MPhil/PhD**
- 58:12 Dundee, *Biological sciences*, MSc/PhD;** supervision available, main research interests inc: cyanobacteria (blue-green algae); picoplankton and other marine cyanobacteria; genetic analysis of N fixation and assimilation in cyanobacteria, ecological and molecular genetics of heterotrophs and autotrophic bacteria; generation of bioactive molecules from photosynthetic and other micro-organisms; structural, regulatory and genetic studies of enzymes of carbon dioxide assimilation; osmotic responses of micro-organisms; gene pools of micro-organisms and their biotechnological uses; physiol and biochem aspects of algal cell growth in photoreactors; cyanobacterial toxins; algal and bacterial cell immobilisation production of excretion products; microbial growth and low temps; use of antibodies as molecular probes; viruses and other microbial pathogens; microbiol of estuarine sediments; microbiol of bacteria involved in sulphur cycle; physiol of fungi, yeasts and fish; growth of micro-algae under light-limited conditions; limitations on C, N and P acquisition by macrophytes in fast-flowing streams; stomatal responses to water deficit stress; nitrogen nutrition of legumes and nodulated tree legumes; influence of genotypes and rock phosphates in mycorrhizal and nodulated plants in semi-arid tropics; ecology of mires; eutrophication and waste treatment in freshwater; marine and estuarine ecology; dermal/epidermal interactions in development and growth of skin appendages; transplantable collagens for tissue replacement; biol of reptile parasites and reptile ecology; reproduction and physiol of mosquitos in relation to control; use of insect natural enemies in bio control; mass rearing of predators; evolutionary stability; mathematical modelling of ecology, behaviour and evolution; evolution and ecology of predation and parasitism; feeding behaviour and prey polymorphism; aposematism and mimicry; avian ecology and genetics; molluscan ecology and genetics. Contact Dr MJ Daft
- 58:13 East Anglia, *Ecology*, MPhil/PhD**
- 58:14 East Anglia, *Environmental sciences*, MPhil/PhD**
- 58:15 Essex, *Biology*, MSc/MPhil/PhD;** supervision available, current research inc: immunol, mechanisms of photosynthesis (light harvesting apparatus and electron transport, carbon dioxide assimilation), development of photosynthetic systems, environmental effects on physiol of photosynthesis, genetics of hormone production and development in mice, biochem events during cell cycle, recombinant-DNA technology in micro-organisms, virology, control of DNA transcription by specific proteins, protein/DNA interactions, control of gene action in simple eukaryotes, ecological genetics and adaption in natural populations, productivity and nutrient cycling in freshwater and brackish lakes, primary production in saltmarshes, microbiol of S, N and C in

sediments ecology and physiol of soil micro-organisms reclamation of derelict land Contact Dr

NR Baker

58 16 **FRANKLIN** *Life sciences*, MPhil/PhD (CNA)

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58 19 **Henot Watt**, *Brewing and biological sciences*, MSc/PhD

58 20 **Huddersfield Poly**, *Life sciences*, MPhil/PhD (CNA)

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58 26 **Leeds Poly**, *Health and applied sciences*, MPhil/PhD

58 27 **Leicester Poly**, *Life sciences*, MPhil/PhD (CNA)

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different sensory modalities within CNS *genetics cytology and molecular biol* mechanisms to

(channelling) in *Escherichia coli* *enzymology* separation techniques for biogenic amines

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58 38 **Napier C (Edinburgh)**, *Science* MPhil/PhD (CNA) supervision available for research information available from Heads of Depts of Biol Sciences Applied Chem Sciences Computer Studies Maths Physics Contact Information Office

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58 44 **Oxford**, *Applied biology and soil science*, MLatt/MSc/DPhil

58 45 **Oxford**, *Biological anthropology*, MSc/DPhil

58 46 **Oxford**, *Biomathematics*, MSc/DPhil

- 58:47 **Oxford, *Morphology and development***, MSc/DPhil
- 58:48 **Oxford, *Taxonomy and ecology***, MSc/DPhil
- 58:49 **Oxford Poly, *Biology***, MPhil/PhD (CNA)
- 58:50 **Paisley CT, *Biology***, MPhil/PhD (CNA)
- 58:51 **Plymouth Poly, *Biological sciences***, MPhil/PhD (CNA); supervision available for research; facilities in particular for biol fieldwork, based on local moors, rivers, estuary, sea; lab eqpt for almost all branches of mod biol; exptl station with pilot fish farm, greenhouses, exptl plots and woodland; sub-littoral ecological work possible; diving training available. Contact Academic Registrar
- 58:52 **Plymouth Poly, *Environmental sciences***, MPhil/PhD (CNA); supervision available for research; interests inc: estuarine pollution, lake sedimentology; chem analysis in medical, forensic, industrial and environmental fields using wide range of analytical eqpt. Contact Academic Registrar
- 58:53 **Poly of Central London, *Applied ecology***, MPhil/PhD
- 58:54 **Poly of Central London, *Neurobiology and psychology***, MPhil/PhD (CNA)
- 58:55 **Poly of North London, *Food and biological sciences***, MPhil/PhD (CNA)
- 58:56 **Poly of Wales, *Science***, MPhil/PhD (CNA)
- 58:57 **Portsmouth Poly, *Biological sciences***, MPhil/PhD (CNA)
- 58:58 **St Andrews, *Marine biology***, MSc/PhD
- 58:59 **Salford, *Biological sciences***, MSc/PhD; supervision available, interests inc: *agricultural biol*: effects of environmental factors on microfauna of crop/soil interface; *entomology*: biol of bark beetles; *biol materials analysis*: high-speed automatic methods; *clinical biochem*: biochem of lens proteins; *environmental studies*: ecological surveys of Dee and Mersey estuaries; *enzymology and protein biochem*: cellulases and hemicellulases; *freshwater fisheries*: feeding habits of freshwater fish; *human physiol*: effects of physical work and exercise on healthy human beings; *immunobiol*: delineation of immune response in fish; *ionisin*: structure and function; *microbiol*: ecology and developmental biol of and neuropharmacology: role of neuroglia in nervous systems of molluscs and insects; *parasitology*: host-parasite relationship in organisms responsible for trypanosomiasis and filariasis; *plant pathology*: fungal diseases of wheat; *plant cytology*: structure of plant cells; *plant tissue culture*: production of secondary metabolites by cultured plant cells; *seed technology*: seed viability; *vertebrate studies*: locomotory organs of fish. Contact Professor TA Villiers See page 261
- 58:60 **Salford, *Environmental studies***, MSc/PhD
- 58:61 **Sheffield City Poly, *Biological sciences***, MPhil/PhD (CNA)
- 58:62 **Southampton, *Biology***, MPhil/PhD
- 58:63 **South Bank Poly, *Applied biology and food science***, MPhil/PhD (CNA)
- 58:64 **Stirling, *Biology***, MSc/PhD; supervision available for research in Dept of Biol Science; current interests inc: *microbiol*: ecophysiol of fungi, bioconversions; microrespiration and energy balance in protozoa; slime mould development; fungal spore germination; *plant physiol*: ultrastructure and developmental biol of cells; physiol and biochem of ethylene controlled processes; water relations; stomatal function; photosynthesis and respiration; seed development and germination; *plant ecology*: metalliferous soils; tropical ecology; forest dynamics; numerical analysis; *animal physiol*: hormonal control of water balance in hibernating and xeric mammals; fish physiol; airbreathing in inter-tidal fish; swimbladder and kidney function; neurophysiol of Arthropods; structure and function of sensory organs in crustacea; *animal ecology*: foraging and breeding energetics of birds; population dynamics; aquatic and littoral studies; aquatic pollution. Contact Professor JR Sargent
- 8:65 **Strathclyde, *Biology***, MSc/PhD; supervision available; research interests inc: *molecular biol*: DNA methylation and eukaryotic gene expression; structure and expression of genes for 'stress proteins' in animals and plants; *pesticides*: mode of action and basis of selectivity of certain foliage or soil-applied herbicides and fungicides; *cell biol*: role of heat shock proteins in plant and animal cells; effects of hyperthermia on normal and cancer cells; ultrastructural and cytochem studies on actinorrhizal and mycorrhizal symbioses in leguminous and non-leguminous nodulated plants; alkaloid induced changes in fine structure of mammalian tissues; *genetics*: genetics of tissue transplantation in relation to maintenance of histo-compatibility polymorphism in natural populations of mammals; population genetics of weeds and rare endemic plant spp; computer analysis of relevant models. Contact Professor RH Burdon
- 58:66 **Thames Poly, *Biological sciences and environmental health***, MPhil/PhD (CNA)
- 58:67 **Trent Poly, *Life sciences***, MPhil/PhD (CNA)
- 58:68 **Ulster, *Biology***, MPhil/DPhil

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## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

58 76 **Aberdeen, Ecology**, MSc 1c yr ft (hons deg in biol, botany, forestry, zoology or equiv qual usually req; deg in geog, geol or soil science considered) *course inc* gen theory of ecology and

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water pollution and in management of water resources; training for employment by water authority, river purification board, drainage and water supply authority, water research lab or industry concerned with toxicity testing or effluent treatment, *main subj areas* natural quality of water resources, pollution causes, pollution effects, pollution control, assessment of coursework, written exam, research project. Contact Information Office.

58 90 **NE London Poly, Biology in education**, MSc/Diploma (CNAAB)  
58 91 **Oxford, Human biology**, MSc/Diploma  
58 92 **Portsmouth Poly, Biodeterioration of materials**, MSc (CNAAB)  
58 93 **Reading, Biometry**, MSc  
58 94 **Salford, Environmental resources**, MSc/Diploma  
58 95  
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58 97  
58 98  
58 99  
58 100

## Certificates and diplomas

58 101 **Durham, Ecology**, Diploma  
58 102 **East Anglia, Biological sciences**, Diploma

Biological,

**58:103 East Anglia, *Environmental sciences*, Diploma**

**58:104 Essex, *Biology*, Diploma**

**58:105 Lancaster, *Ecological and environmental sciences*, Diploma, 1 yr f-t (deg or equiv in approp science subj normally req, other applicants considered); offers specialist knowledge in wide range of aspects of ecology and environmental sciences, suitable preparation for research; *course content*: designed to meet individual needs, choice of units in biol sciences, ecology, environmental sciences, practical work, research or lit dissertation; assessment of coursework, exam, dissertation. Contact Dr KJ Beven, Dept of Environmental Science**

**58:106 Liverpool IHE, *Environmental education*, Diploma**

**58:107 NE London Poly, *Biometry*, Diploma (CNA)**

**58:108 Portsmouth Poly, *Environmental education*, Diploma**

**58:109 Southampton, *Biology*, Certificate**

**58:110 Sunderland Poly, *Ecology*, Certificate**

**58:111 West Midlands CHE (Walsall), *Environmental studies in the middle years of schooling*, Diploma (CNA)**

**UNIVERSITY OF EAST ANGLIA  
NORWICH  
SCHOOL OF BIOLOGICAL SCIENCES  
POSTGRADUATE STUDIES IN  
NORWICH**

**TWO-YEAR MSc DEGREE PROGRAMME IN  
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*including*

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Plant Biology	Fish Biology	Biochemistry

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repute in most fields of contemporary biology

*For further information and application form, write to:*  
**Senior Administrative Assistant, School of Biological Sciences, University of East Anglia,  
University Plain, Norwich, Norfolk NT4 7TJ, England**

## DEPARTMENT OF BIOLOGICAL SCIENCES

Supervision is available for research leading to the degrees of MSc and PhD, either full-time or part-time, in the following fields of study

- **Animal Sciences** – parasitology, entomology, freshwater fisheries, human and clinical physiology, agricultural biology, neurobiology, vertebrate anatomy
- **Biochemical Sciences** – immunobiology, membrane structure and function, clinical biochemistry, enzymology, biological materials analysis, radiation biology, photobiology
- **Microbiology** – microbial ecology, biochemical and genetic analysis, cell binding, biology of food yeasts
- **Plant Sciences** – seed technology, seed physiology, plant pathology, cytology and electron microscopy, plant tissue culture

Further information and prospectuses are available from The Chairman, Department of Biological Sciences, University of Salford, Manchester M5 4WT

## University College of Swansea SCHOOL OF BIOLOGICAL SCIENCES

Biological sciences, **MSc/PhD by research** supervision available in biochem, botany, genetics, microbiol and zool, research areas inc:

- **Biomedical and physiol studies** comparative immunol inc effects of pollutants, molecular mechanisms in carcinogenesis and genetic toxicology; monoclonal antibodies, neurophysiology; chem influence on behaviour and physiology
- **Ecological and evolutionary studies** genetic variation in populations, esp in relation to breeding systems, ecological diversity and maintenance of separation in closely related spp; chloroplast inheritance.
- **Marine biology** reproductive biol of invertebrates and fish, fisheries biology; shellfish biol, biol of benthic animals and communities, parasitology; pollution and phytoplankton ecology
- **Plant and microbial metabolic studies** physiol, biochem and molecular biol of microalgae and fungi; host-pathogen interaction in plant disease; microbial metabolism of cellulose and lignin, biotechnology of waste and renewable resources, salt tolerance
- **Biochemical studies** biochem of higher plants and cyanobacteria esp N-cpds, lipids and cell wall polysaccharides, free nucleotides in mammalian tissue

### MSc Genetics and its applications

A one year full time MSc course with common core of basic genetics, cytogenetics, molecular genetics, biol data analysis and computing plus one of following four streams of specialisation: (1) genetics and its applications (in conjunction with Centre for Development Studies) (2) modern techniques in molecular genetics and genetic toxicology (3) applications of genetics to animal breeding (with emphasis on fish) (4) applications of genetics in ecological and evolutionary biol, assessment of course partly by exam on course work and continuous assessment based on practical classes and tutorial essays, and partly by dissertation on research project.

Contact Dr James M Parry, University College of Swansea,  
Singleton Park, Swansea SA2 8PP

**UNIVERSITY  
OF  
SUSSEX**



**School of Biological Sciences**

**MPhil and DPhil** Instruction and supervision  
in the fields of Biochemistry, Genetics,  
Experimental Psychology, Neurophysiology,  
Ethology, Plant Physiology, Evolution Theory,  
Ecology and Conservation Management

**MSc** 1-year courses in Biochemistry,  
Biochemical Endocrinology, Genetic  
Manipulation and Molecular Biology,  
Plant Biochemistry and Bioenergetics

**Further information:**

Biology or Biochemistry Subject Chairman,  
School of Biological Sciences, University of  
Sussex, Brighton BN1 9QG

*(See also separate entries)*

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headings**

**on page  
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## 59 Biological sciences: biochemistry

### Higher degrees by research

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- 59.1  $\Delta H_{\text{fusion}} = 1.1 \text{ kJ/mol}$   $\Delta H_{\text{vaporization}} = 44 \text{ kJ/mol}$   $\Delta H_{\text{condensation}} = -44 \text{ kJ/mol}$   $\Delta H_{\text{freezing}} = -1.1 \text{ kJ/mol}$

sulphated polysaccharides in cell growth and haemostasis polysaccharides as therapeutic agents and food additives, glycosaminoglycans, polyamines in regulation of mammalian cell growth, site directed mutagenesis in genes coding for enzymes, DNA repair mechanisms **Contact Professor HM Keir**

- 59 2 Aston, *Molecular sciences*, MPhil/PhD

**59.3 Bath, Biochemistry, MSc/PhD**

59 4 Belfast, *Biochemistry*, MSc/PhD

59 5 Birmingham, *Biochemistry*, MSc/PhD

59 6 Bristol, *Biochemistry*, MSc/PhD

**59.7 Brunel, Biochemistry, MPhil/PhD**

**59.8 Cambridge, Biochemistry, MSc/PhD**

59 9 Cambridge, *Biochemistry*, MPhil

59.10 Dundee, *Biochemistry*, MSc/PhD

**59,11 East Anglia, Biochemistry, MPhil/PhD**

59:12 Edinburgh, *Biochemistry*, MPhil/PhD

59 13 F-14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1

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59.18 Keele. *Biochemistry*. MSc/PhD

59.19 Kent, *Biological sciences*. MSc/PhD

59 20 Lancaster, Biochemistry, MPhil/PhD, supervision available in Dept of Biol Sciences, research interests *mammalian biochem* changes in cellular metabolism during deficiencies of magnesium and potassium, structure and stabilisation by cross linking of fibrous proteins and related

the 1990s, the number of people in the world who are under 15 years of age is expected to increase by 1.5 billion, from 1.1 billion in 1990 to 2.6 billion in 2010. The number of people aged 65 and over is expected to increase by 1 billion, from 350 million in 1990 to 1.4 billion in 2010. The number of people aged 15-64 is expected to increase by 1.5 billion, from 2.5 billion in 1990 to 4.0 billion in 2010. The number of people aged 65 and over is expected to increase by 1 billion, from 350 million in 1990 to 1.4 billion in 2010. The number of people aged 15-64 is expected to increase by 1.5 billion, from 2.5 billion in 1990 to 4.0 billion in 2010.



nism of muscle contraction, gene expression and cloning technology, regulation of bacterial intermediary metabolism, cell surface organisation in malignant cells, production of antibiotics by bacteria, energy transduction in aerobic bacteria, enzymology and amino acid metabolism in micro-organisms, insulin synthesis and secretory processes, carbohydrate metabolism, fine structure and reconstruction of A-filaments, hydrodynamics of macromolecular solns, molecular enzymology and structure-function relationship in proteins, biochem events during synchronous nuclear division cycle in plasmodia. **Contact** Registrar (Higher Degrees)

**59:23 Liverpool, Biochemistry**, MSc/PhD; supervision available, research interests in following areas: biochem and biosynthesis of plant triterpenes, sterols and vitamin E; biochem of carotenoids; mass spectrometry; formation and function of terpenoids, steroids and fat soluble vitamins in marine invertebrates; absorption, transport, biosynthesis and metabolism of lipid in animals; mode of action of vitamin A; structure and function of cellular membranes and plasma lipoproteins; microbial metabolism and its regulation; purification of proteins; photosynthesis; molecular properties of hexokinases and other enzymes; control of enzyme activity by covalent modification; chloroplast development; role of lipids in mitochondrial structure and function; regulation of protein breakdown in muscle; recombinant DNA/gene cloning in relation to biochem of hormone action; DNA replication and repair systems; biosynthesis and structure of transfer RNAs; biochem of RNA and DNA of plant tissues; biosynthesis and assembly of penicillin-binding proteins of *E coli*; cloning of characterisation of developmentally regulated genes in *Xenopus*; role of neutrophils in human inflammatory diseases. **Contact** Dr LJ Goad

**59:24 Liverpool Poly, Biochemistry**, MPhil/PhD (CNA)

**59:25 London (Birkbeck), Biomolecular organisation**, MPhil/PhD

**59:26 London (Imperial), Biochemistry**, MPhil/PhD; supervision available, research interests in molecular biol, protein chem, physiol biochem, neurochem, microbial metabolism, structure; current projects inc: *molecular biology*: studies on *Drosophila* (developmentally related genes), mouse (tumour cells), *Aplysia* (neuropeptide hormones) and *Leishmania* (human parasite) gene expression by recombinant DNA, monoclonal antibody, cloning, transformation and hybridisation techniques; genetic engineering studies on micro-organisms to develop procedures for large-scale production of medically or industrially important products; *protein chemistry*: structure and function of proteins and peptides, especially enzymes involved in protein synthesis and neuropeptides; large-scale purification of enzymes from thermophilic organisms; development of mass spectrometry and other techniques for determining the structures of 'biomolecules' of potential medical, agricultural and industrial importance; protein sequencing; *physiological biochemistry and neurobiology*: comprehensive studies on the characterisation of neuroreceptors both purified and in the membrane, the molecular biology of neuroreceptors, the action of neurotoxins on receptors and on neurotransmitter release; mechanisms of transmitter release and their control, identification of specific transmitter compounds and the applications of these and other studies eg synaptosomes as model nerve terminals and brain superfusion techniques to investigate neurochemical mechanisms underlying epilepsy and dyskinesia; studies on the structure, biosynthesis and turnover of brain peptides, particularly opioid peptides, purinergic nerve transmission; *microbial biochemistry, microbiology and fermentation*: isolation, structure, biosynthesis and mode of action of secondary metabolites of bacteria and fungi, especially mycotoxins; studies on fungal pathogens of plants, particularly elicitor reactions and host-parasite interactions in ergot fungi. **Contact** Dr AG Dickerson

**59:27 London (KQC), Biochemistry**, MPhil/PhD

**59:28 London (Queen Mary), Biological sciences**, MPhil/PhD

**59:29 London (RHBC), Biochemistry**, MPhil/PhD

**:30 London (UC), Biochemistry**, MPhil/PhD

**:31 Manchester, Biochemistry**, MSc/PhD; supervision available; current research inc: *structure and function of biol membranes*: transport systems, protein-lipid interactions, cell adhesion, bacterial cell walls; *protein synthesis and nucleic acids (molecular and genetic aspects)*: DNA-binding proteins, endonucleases, cell cycle, gene regulation, conformational studies of proteins and nucleic acids, messenger RNA in plant systems; *protein eng*: computer-based design of hormonal peptides, neuro-active peptides and artificial vaccines, their synthesis and biol assessment; *regulation of metabolism*: hormone action and receptors, liver and brain metabolism, protein turnover, lysosomal storage diseases, tumour proteases, regulation of enzyme activities, intestinal absorption, gastric hormones; *biochem of connective tissues*: structure, synthesis and degradation of connective tissue macromolecules in health and disease; *complex systems*: photobiol, blood clotting. **Contact** Dr Keith Burdett

**59:32 Manchester (UMIST), Biochemistry**, MSc/PhD

- 59 33 Newcastle, *Biochemistry*, MSc/PhD  
 59 34 NE London Poly, *Biology and biochemistry*, MPhil/PhD (CNAAB)  
 59 35 NE Wales IHE, *Biochemistry*, MPhil/PhD (CNAAB/Salford)  
 59 36 Oxford *Biochemistry* MSc/DPhil supervision available research interests inc biochem applica

vitellogenin genes in *Xenopus* structure and organisation of complement component genes and the mechanism of complement activation chemotaxis and cell signal transmission in Dic

phototaxis *genetics lab* genetics and nature of some x linked disorders somatic cell genetics using human mouse and other hybrids molecular organisations of human x and y chromosomes population genetics control of developmental processes in *Drosophila* clinical genetics and cytogenetics Contact Dr Peter C Newell

- 59 37 Poly of Central London, *Biochemistry applied microbiology and biotechnology* MPhil/PhD  
 59 38 Portsmouth Poly, *Animal biochemistry and physiology* MPhil/PhD (CNAAB)  
 59 39 Reading, *Physiology and biochemistry* MPhil/PhD  
 59 40 St Andrews, *Biochemistry and microbiology* MSc PhD  
 59 41 Sheffield, *Biochemistry* MSc/PhD  
 59 42 Southampton, *Biochemical and physiological sciences* MPhil PhD  
 59 43 Stirling *Biochemistry* MSc/PhD supervision available for research in Dept of Biol Science current interests inc toxicology of marine organisms mechanisms of enzyme action enzyme sub unit interactions protein folding biochem aspects of development spore and seed germination

59 44

of animals and man leukotrienes as mediators in rheumatoid diseases inter relationships between

- 59 45 Professor RD Marshall

membranes biophysical properties of natural and synthetic membranes metabolic regulation regulation of metabolism in developing neonatal rat microbial biochem yeast cell walls nursing

development of measures of nursing care; *pathology*: pathological changes in different strains of ageing rats; *pharmacological biochem*: metabolism and mode of action of drugs; *plant biochem*: cytochrome P-450 in higher plants; *steroid biochem*: effect of pregnancy, pregestogens and contraceptive steroids on drug metabolism; *toxicology*: liver cell culture as model system in toxicology. Contact Dr JAR Genge

- 59:46 **Sussex**, *Biochemistry*, MPhil/DPhil; supervision available in following areas of research: regulation of transcription; molecular enzymology, esp of oxidative metalloenzymes; regulation of gene expression in eukaryotes; regulation of insulin secretion; nuclear proteins and subnuclear components; energy conservation in plant mitochondria; regulation of protein synthesis at translational level in mammalian cells and tissues; molecular behaviour of bacterial penicillin-binding proteins; hormonal regulation of carbohydrate metabolism; biochem of polypeptide hormones and growth factors; membrane transport proteins and control of membrane permeability; control of lymphocyte activation; post-translational processing of peptide hormone precursors. Contact Dr RC Bray
- 59:47 **Thames Poly**, *Biological sciences*, MPhil/PhD (CNAA)
- 59:48 **Wales (Aberystwyth)**, *Biochemistry and agricultural biochemistry*, MSc/PhD See page 267
- 59:49 **Wales (Bangor)**, *Biochemistry and soil science*, MSc/PhD
- 59:50 **Wales (Cardiff)**, *Biochemistry*, MSc/PhD
- 59:51 **Wales (Swansea)**, *Biological sciences*, MSc/PhD
- 59:52 **Wales (UWIST)**, *Applied biology*, MSc/PhD
- 59:53 **Warwick**, *Biochemistry*, MSc/PhD
- 59:54 **York**, *Biology including biochemistry*, MPhil/DPhil

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses

- 59:55 **Aberdeen**, *Immunobiology*, MSc
- 59:56 **East Anglia**, *Biological sciences*, MSc
- 59:57 **Essex**, *Molecular biochemistry*, MSc
- 59:58 **London (Birkbeck)**, *Biomolecular organisation*, MSc
- 59:59 **London (KQC)**, *General biochemistry*, MSc
- 59:60 **London (UC)**, *Applied molecular biology and biotechnology*, MSc
- 59:61 **London (UC)**, *Biochemistry*, MSc
- 59:62 **Manchester (UMIST)**, *Bioreactor systems*, MSc/Diploma
- 59:63 **Newcastle**, *Biochemistry*, MSc
- 59:64 **NE Wales IHE**, *Biochemistry*, MSc (Salford)
- 59:65 **Southampton**, *Biochemical pharmacology*, MSc
- 59:66 **Surrey**, *Chemical and biochemical sciences and education*, MSc/Diploma
- 59:67 **Surrey**, *Clinical biochemistry*, MSc
- 59:68 **Sussex**, *Biochemical endocrinology*, MSc
- 59:69 **Sussex**, *Biochemistry*, MSc
- 59:70 **Sussex**, *Genetic manipulation and molecular biology*, MSc
- 59:71 **Sussex**, *Plant biochemistry and bioenergetics*, MSc
- 59:72 **Wales (Aberystwyth)**, *Biochemistry and agricultural biochemistry*, MSc/Diploma See page 267

## Certificates and diplomas

- 59:73 **Cambridge**, *Biochemistry*, Certificate
- 59:74 **East Anglia**, *Biological sciences*, Diploma

## University College of Wales, Aberystwyth

### Biochemistry and Agricultural Biochemistry

#### MSc/PhD by research

Particular strength in Plant Biochemistry and Microbial Biochemistry. Current research in: the structure, assembly and functions of membranes; electron transfer proteins; transport mechanisms; biosynthesis and function of porphyrins, carotenoids and sterols; natural products of marine organisms; plant polysaccharides; microbial degradation of aromatic and aliphatic molecules; microbial biochemistry of the rumen; soil science and plant productivity.

#### MSc by taught course

One-year courses in Plant Biochemistry or in Soil Science and Plant Productivity provide a specialised training. A two-year course is available for graduates in agricultural sciences or chemistry seeking a general training in biochemistry. Syllabus and research projects in the second year by consultation with the student.

See also courses 55, 11, 55, 17 and 56, 7.

Further information from: Postgraduate Admissions Tutor  
The Department of Biochemistry, UCW Aberystwyth, Dyfed  
SY23 3DD

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## 60 Biological sciences: biophysics

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 60:1 East Anglia, Biophysics, MPhil/PhD**
- 60:2 Lancaster, Biophysics, MPhil/PhD**
- 60:3 Leeds, Biophysics, MPhil/PhD;** supervision available for research in following fields: studies of structures and activities of proteins by x-ray crystallographic, spectroscopic and kinetic methods; molecular structures of hormones and drugs; development of interactive computer display methods in study of molecular structure and interactions; structural studies of polysaccharides from plant cell walls by x-ray diffraction and spectroscopy; visco-elastic and hydrodynamic properties of plant cell-wall components; structural studies of membranes and other liq crystalline mesophases by x-ray diffraction, freeze-etch electron microscopy and magnetic resonance spectroscopy; primary structures of fibrous proteins. **Contact Dr PF Knowles**
- 60:4 London (Imperial), Biophysics, MPhil/PhD**
- 60:5 London (KQC), Biophysics, MPhil/PhD**
- 60:6 London (UC), Physiology and biophysics, MPhil/PhD**
- 60:7 Manchester, Medical biophysics, MSc/PhD**
- 60:8 Open, Biophysics, BPhil/MPhil/PhD**
- 60:9 Oxford, Biophysics, MSc/DPhil**
- 60:10 Southampton, Physics, MPhil/PhD**

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 60:11 East Anglia, Biological sciences, MSc**
- 60:12 London (Birkbeck), Biophysics and bioengineering, MSc**
- 60:13 London (Inst Ophthalmology), Biophysics and bioengineering, MSc**
- 60:14 St Andrews, Radiation biophysics, MSc**

### Certificates and diplomas

- 60:15 East Anglia, Biological sciences, Diploma**

## 61 Biological sciences: botany

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section*

- 61 1 Aberdeen Plant science** MSc/PhD supervision available research interests in following areas plant physiol and biochem esp function of stomata salt relations effects of light and gravity on growth and development root growth and plant proteins ecology esp in relation to Scottish moorland vegetation nutrient cycling effects of pollutants ecology of mycorrhizas morphogenesis electron microscopy and ultrastructural plant cytology taxonomy esp of local hybrid plants tropical botany with sp ref to SE Asia (training in forest botany for students from Asian tropics) tissue culture and micropropagation Contact Professor CH Gimmingham

**61 2 Bath, Plant biology** MSc/PhD

**61 3 Belfast, Botany** MSc/PhD

**61 4 Birmingham, Botany** MSc/PhD supervision available research interests in following areas

*and genetic resource conservation conservation of germplasm and pre breeding evaluation of*

**61 5 Bristol Botany** MSc/PhD

**61 6 Brunel, Biology** MPhil/PhD

**61 7 Cambridge, Botany** MSc/PhD

**61 8 Durham, Botany** MSc/PhD

**61 9 East Anglia, Plant biology** MPhil/PhD

**61 10 Edinburgh Botany** MPhil/PhD supervision available main research interests in higher plant

*fixation formation of graft union host-parasite interactions fine structure of plant cells chem taxonomy of Gramineae wide spp hybrids in crop plants systematics and morphogenesis cf diatoms cell wall metabolism fungal morphogenesis Contact Dr RF Lyndon*

**61 11 Glasgow, Botany** MSc/PhD

**61 12 Hull, Plant biology and genetics** MSc/PhD supervision available in following areas plant biochem terpenoid metabolism inc phytoalexins plant physiol transport of water and solutes in plants

*bacteria ecological genetics polymorphism of cyanogenesis in leguminous plants plant animal interactions alien forms of common spp in new roadside verges plant breeding grain maize at low temp. Contact Professor John R Coley Smith*

**61:13 Lancaster, *Plant physiology*, MPhil/PhD**

**61:14 Leicester, *Botany*, MPhil/PhD**

**61:15 Liverpool, *Botany*, MSc/PhD;** supervision available, current research interests: ecology and physiol of freshwater algae with emphasis on pollution and sewage disposal; taxonomy, ecology and physiol of larger marine algae; S metabolism and ecology of blue-green algae; reclamation of difficult land, adaptation and evolution of plants to heavy metals, heavy metal movement through ecosystems; ecology and evolution of weeds; ecology of soil micro-organisms, taxonomy of actinomycetes, fine structure of fungi, fungal protoplasts, physiol of marine fungi, biol of wood decay fungi, cytology and genetics of *Phytophthora*; ion and water transport in plants and plant cells, physiol basis of adaptation to saline conditions; nutrient film technology, physiol of leaf development and root growth in cocoa, plant tissue culture and micropropagation of crop plants and synthesis of secondary metabolites; permeability properties of chloroplasts. Contact Dr ST Williams

**61:16 London (Birkbeck), *Botany*, MPhil/PhD**

**61:17 London (Imperial), *Plant science*, MPhil/PhD;** supervision available for research in Dept of Pure and Applied Biol; research interests inc: *physiol*: photosynthesis; energy transfer, chem of O<sub>2</sub> evolution, electron transport mechanisms, chloroplast structure and function, molecular biol and regulation of gene expression; respiration; electron flux in metabolism; oxidative lignin degradation, secondary product synthesis, differentiation and plantlet regeneration in tissue cultures; *pathology*: mechanisms and induction of disease resistance, determinants of specificity in diseases caused by micro-organisms, role of cell wall degrading enzymes in plant diseases; biol, epidemiology and control of plant diseases esp of tropical crops; biol control of plant diseases; *environmental studies*: ecology of bryophytes and heathland; archaeological charcoals and wood anatomy as environmental indicators; photosynthesis in relation to productivity; sulphur dioxide, ozone, N oxides, acid rain, radionuclides and oil as pollutants damaging plants; remote sensing of vegetation; *timber technology*: ecology and nutrition of micro-organisms colonising wood; movement of water in wood; biol and chem control of wood decay, fate of chem preservatives in environment. Contact Registrar

**61:18 London (KQC), *Plant sciences*, MPhil/PhD;** supervision available for research, current projects inc: biochem of photosynthesis in micro-organisms and higher plants; molecular biol of hydrogenases and other metallo-enzymes; biol solar energy conversion of H<sub>2</sub>-producing biophotolysis systems, biochem of chloroplast development; chloroplast fine structure; molecular biol of chloroplast DNA; seed biol esp seed development, mobilisation of seed reserves during germination, dormancy and viability; mechanisms of action of plant growth substances; photomorphogenesis; regulation and control of biosynthesis of secondary plant products (esp monoterpenes) by plant tissue cultures; plant protoplast fusion and intermediary metabolism; computer simulation of plant morphogenesis; cellular differentiation in xylem and phloem; biol of cell nucleus; pollen analysis and environmental hist of Britain, Middle E and S Europe; ecology of arid and semi-arid environments and of peat forming ecosystems; macrofossil analysis and vegetational hist of Tertiary period; exptl modelling of fossilisation processes. Contact Professor C Barry Cox

**61:19 London (Queen Mary), *Biological sciences*, MPhil/PhD**

**61:20 London (RHBC), *Botany*, MPhil/PhD**

**61:21 London (UC), *Botany*, MPhil/PhD**

**61:22 Manchester, *Botany*, MSc/PhD;** biological sciences at Univ of Manchester are undergoing major reorganisation; existing Dept of Botany will contribute to two major Depts (Cell and Structural Biology and Environmental Biology) with effect from October 1986; research in progress at present inc: *plant physiol*: intermediary metabolism, photomorphogenesis, stress metabolism, mitochondrial ion transport; *morphogenesis*: differentiation in higher fungi, development in liverworts and mosses, ultrastructure and polypeptide patterns in fern development, development in monocotyledons, root initiation and growth, leaf structure, feeding, reproduction in protozoa, morphogenetic role of microtubules, ultrastructure of bacterial diseases, dinoflagellate structure, x-ray microanalysis; *biochem genetics*: molecular aspects of transport, enzyme control and development in fungi; *plant pathology and mycology*: diseases of temperate and tropical plants, disease control, epidemiology, biochem of resistance, organisation of fungal growth; *ecology, physiol ecology, pollen analysis*: structure and integration of plant communities, effects of pollutants and pathogens, reproductive strategies, peat formation and erosion; *horticulture and crop ecology*: seed germination, seedling estab, plants of disturbed areas, water content and effect on growth and yield, nutrient uptake, soil-less cultures; *fossil plants*: cuticle studies in Mesozoic fossils. Contact Dr Moore

- 61:23 Newcastle, *Plant biology*, MSc/PhD  
 61:24 NE London Poly, *Biology and biochemistry*, MPhil PhD (CNAAB)  
 61:25 Nottingham, *Botany*, MPhil PhD  
 61:26 Open, *Biology*, BPhil MPhil PhD  
 61:27 Oxford, *Plant physiology*, MSc DPhil  
 61:28 Reading, *Botany*, MPhil PhD  
 61:29 St Andrews, *Plant biology and ecology*, MSc PhD  
 61:30 Sheffield Hallam, *Biology*, MSc PhD

and Al, *biosystematics*, chemotaxonomy, numerical taxonomy and cytology of *Allium*, evolution and cytotaxonomy of *Erophila* and spp relationships in *Ulex*, distribution and metabolism of polyols and fructans in leafy liverworts. Contact Professor AJ Willis

- 61:31 Essex, *Plant biology*, MSc PhD  
 61:32 Hull, *Plant biology*, MSc PhD

- 61:33 Hull, *Plant biology*, MSc PhD  
 61:34 Hull, *Plant biology*, MSc PhD  
 61:35 Hull, *Plant biology*, MSc PhD

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject (normally lasting three months) with submission of a written report as a part of these courses

- 61:36 Hull, *Plant biology*, MSc PhD  
 61:37 Hull, *Plant biology*, MSc PhD  
 61:38 Hull, *Plant biology*, MSc PhD  
 61:39 Hull, *Plant biology*, MSc PhD

### Certificates and diplomas

- 61:40 Aberdeen, *Modern botanical methods*, Diploma  
 forestry req professional experience in botanical fieldwork, approaches and methods relevant to botanical fieldwork, topics inc plant collection, identification, plant survey, expil design, stat sampling, plant tissue culture, glasshouse techniques, morphogenesis, anatomy, plant growth, tropical plant culture, pollution, resource management  
 61:41 East Anglia, *Biological sciences*, Diploma  
 61:42 London (KQC), *Plant biology*, Diploma



## **PLYMOUTH POLYTECHNIC**

**MSc**

### **Applied Fish Biology**

1c yr f-t: 3 yrs p-t: training in principles of fish biology with emphasis on applications in aquaculture and fisheries; *part 1*: (6 mths) taught course in fish biology, economics, marketing; exam; *part 2*: research project often located in appropriate firms or research institutes; thesis.

*For further information please contact:*

**Professor M Manning**  
**Plymouth Polytechnic**  
**Drake Circus, Plymouth PL4 8AA**  
**Tel: 0752 221312**



## **Postgraduate awards?**

Read the  
editorial on  
pages 17–22

## **Abbreviations**

See pages 31–33

# 62 Biological sciences: genetics

## Higher degrees by research

Can da es a e expected o l old a good l o u d g e e a b  
propose to carry o t ressea cl Info ma on ab e p l ud  
gen tile En ance equ remen and pe od f ud pu ug opt  
a e s u d e s section

- 62 1 Aberdeen Genetics MSc/PhD
- 62 2 Belfast Genet cs MSc/PhD
- 62 3 Belfast, Med cal gen et cs Phd
- 62 4 B r mingham Genet cs MSc/PhD  
(some examples g en) empha up rv n a a l h e a h  
test ng of new exp l appr che o d m n n u f g n n u n  
metrical characters and pred c n o n qu n e f n and n n  
t cs natu e extent and gen c l on qu n e f n u n n n  
t cs mechan sms n ol ed n m h m m p n k and h n d p  
controls of these p o c e n plan and n m n n p n n  
morphogenesis n p okaryo u n b n n n p n n f  
gene cs gen et c analys of na u n n p f h h d p u d  
Aspe g llus molecu la gene gen n n p f h h d p u d  
ment as clon ng ec ors Contact D M J h b d h n d h d n n
- 62 5 Cambr dge Genetics MS Phd
- 62 6 East Ang la Genet cs MPh I Phd
- 62 7 Ed nburgh Genet cs MPh I Phd See page 274
- 62 8 Glasg ow Genet cs MSc/PhD
- 62 9 Hull Plant b ology and genetics MS Phd
- 62 10 Leeds Genet cs MSc/Phd
- 62 11 Leicester Genet cs MPh I Phd  
t cs populat on gen et cs molecu la p c pul n a a labl m e n  
mammal an gene cs beha oural gene c Contact R m m d h n
- 62 12 Liverpool Genet cs MSc/Phd
- 62 13 London (Imperial) M crob ology MPh I Phd
- 62 14 London (Queen Mary) B olog cal sc ences MPh I Phd
- 62 15 London (UC) Genet cs and b ometry MPh I Phd
- 62 16 Manchester Genet cs and cell b ology MSc Phd
- 62 17 Newcastle Genet cs MSc/Phd
- 62 18 Newcastle Human genetics MSc/Phd
- 62 19 NE London Poly B ology and b ochem try MPh I Phd CNA A
- 62 20 Nottingham Genet cs MPh I Phd
- 62 21 Oxford B ochem
- 62 22 Portsr
- 62 23 Sheffe
- 62 24 Southai
- 62 25 Strathclyde B ology MSc/Phd
- 62 26 Sussex, Gen
- 62 27
- 62 28

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normal part of these courses.*

- 62:29 Birmingham, *Applied genetics*, MSc  
62:30 East Anglia, *Biological sciences*, MSc  
62:31 Edinburgh, *Animal breeding*, MSc/Diploma See page 274  
62:32 Wales (Swansea), *Genetics and its applications*, MSc

## Certificates and diplomas

- 62:33 Cambridge, *Genetics*, Certificate  
62:34 East Anglia, *Biological sciences*, Diploma  
62:35 Edinburgh, *Genetics*, Diploma See page 274  
62:36 London (LSH and TM), *Human and clinical genetics*, Diploma

# Cranfield

AND

Biotechnology Centre

Leicester  
Biocentre

## MPhil/PhD BY RESEARCH: BIOTECHNOLOGY

Cranfield Biotechnology Centre and Leicester Biocentre have united to provide an environment of scientific excellence combined with industrial awareness in which to study for a MPhil/PhD in the exciting multidisciplinary field of biotechnology

We offer a range of research projects:-

- engineering of proteins/enzymes
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- biodeterioration
- genetic manipulation
- fermentation
- biocatalysis
- biochemical engineering
- environmental biotechnology

Some financial support for UK graduates is available

Further details and application forms from

Student Admissions Officer  
Cranfield Biotechnology Centre  
Cranfield Institute of Technology  
Bedford MK43 0AL  
(0234) 750111

## University of Edinburgh

### Department of Genetics PhD, MSc and Diploma

#### *MPhil/PhD by research*

Supervision available in quantitative genetics, evolution and animal breeding, mutation research, genetics of pathogenic protozoa, molecular genetics, development and gene expression, including techniques of molecular genetic manipulation.

#### *Diploma MSc in Animal Breeding*

Given jointly with the Edinburgh School of Agriculture with 9 months' course work (Diploma) and additional 3 months' project (MSc), aimed at providing the basic knowledge to direct programmes in animal breeding. Courses in quantitative genetics, statistics, computing, animal physiology and theory and application of livestock improvement.

#### *Diploma in Genetics*

A 9-month course tailored to individual needs to enable graduates in biological sciences, biochemistry or agriculture to achieve qualifications up to Honours level in genetics and to convert to a research career in genetics.

Further information from:  
Postgraduate Admissions Tutor,  
Department of Genetics,  
University of Edinburgh,  
West Mains Road,  
Edinburgh EH9 3JN

## 63 Biological sciences: microbiology

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

**63.1 Aberdeen, Microbiology, MSc/PhD, supervision available** current research interests: mecha-

yeast mycelial dimorphism, transhyphal electrical currents and polarity of cell growth. Contact Professor WA Hamilton.

**63.2** *Research interests: MSc/PhD*

**63.3** ..

**63.4** ..

**63.5** ..

**63.6 Bristol, Microbiology, MSc/PhD**

**63.7 Brunel, Biology, MPhil/PhD**

**63.8** *Research interests: MSc/PhD*

**63.9** ..

**63.10** ..

**63.11** ..

**63.12** ..

**63.13** ..

**63.14** ..

MPhil/PhD

**63.15** *Research interests: MSc/PhD*

**63.16 Lancaster, Microbiology, MPhil/PhD**

**63.17 Leeds, Microbiology, MPhil/PhD, supervision available for research, current research:** immunol (inc monoclonal antibody), genetic (inc gene cloning) and biochem investigations of function of herpes virus proteins with special reference to those involved in virus DNA replication, virus interaction with antibody and cross reactions between members of gp, mechanism of action of antibiotics, detection of bacterial metabolic products in clinical specimens, plasmid transfer in *Staphylococcus aureus*, ..

antibiotic regimes, infections in patients undergoing continuous ambulatory peritoneal dialysis. Contact Professor DH Watson.

**63.18 Leicester, Microbiology, MPhil/PhD**

**63.19** *Research interests: MSc/PhD*

**63.20** *Research interests: MSc/PhD*

**63.21** *Research interests: MSc/PhD*

antibacterial agents, gaseous sterilants and their bio-monitoring.

*Biological, health*

organisation of plant viruses and plant genetic manipulation; double stranded RNA viruses and plant pathogenic fungi; molecular basis of virus pathogenicity and host resistance. Contact Registrar

- 63:22 London (QOC), Microbiology**, MPhil/PhD; supervision available, research interests inc: fermentation sciences and biotechnology inc production of microbial metabolites and study of mixed cultures; theoretical and exptl ecology of microbial populations inc predator-prey relationships; photobioreactors; algal physiol and biochem inc intra-cellular protein degradation, control of protein synthesis and RNA metabolism; growth dynamics and cell cycle events of bacteria, yeasts and filamentous fungi, fungal physiol and ultrastructure, food microbiol inc water relations of food micro-organisms, genetics in relationship to microbial physiol, mechanism of genetic recombination esp initiation and control of recombination. Contact Professor S John Pirt
- 63:23 London (Queen Mary), Biological sciences**, MPhil/PhD
- 63:24 London (UC), Microbiology**, MPhil/PhD
- 63:25 Manchester, Bacteriology and virology**, MSc/PhD
- 63:26 Manchester, Microbiology**, MSc/PhD
- 63:27 Newcastle, Microbiology**, MSc/PhD
- 63:28 NE London Poly, Biology and biochemistry**, MPhil/PhD (CNAAC)
- 63:29 Oxford, Biochemistry**, MSc/DPhil
- 63:30 Oxford, Microbiology, mycology and pathology**, MSc/DPhil; supervision available, research interests inc: *Microbiol Unit*: metabolism of micro-organisms and its regulation, genetics of bacteria and their viruses, development of bacterial spores, formation and functioning of ribosomes; *NERC Inst of Virology*: virus diseases of insects, their structure and replication, immunol and biophysical characterisation, epidemiology; viruses of forest trees; *Dept of Plant Sciences*: mycological studies, soil microbiol, mycorrhizas, microbial symbiosis, root-disease fungi; microbial genetics. Contact Professor J Mandelstam
- 63:31 Poly of Central London, Biochemistry, applied microbiology and biotechnology**, MPhil/PhD (CNAAC)
- 63:32 Portsmouth Poly, Microbiology**, MPhil/PhD (CNAAC)
- 63:33 Reading, Microbiology**, MPhil/PhD
- 63:34 St Andrews, Biochemistry and microbiology**, MSc/PhD
- 63:35 Salford, Biological sciences**, MSc/PhD
- 63:36 Sheffield, Microbiology**, MSc/PhD
- 63:37 Stirling, Biology**, MSc/PhD
- 63:38 Strathclyde, Applied microbiology**, MSc/PhD; supervision available, research interests inc: *physiol and biochem aspects of fungal metabolism*: factors controlling differentiation and development in filamentous moulds of econ importance, metabolic control and cell biol of sporulation of yeast in submerged culture, 'killer' phenomenon in yeast, biochem of citric acid production by commercially-used fungi; *genetics of yeasts*: flocculation of yeast, cloning of yeast genes and development of novel strains for industrial use by genetic eng; *kinetics of reproduction and metabolism of bacteria, fungi and algae*: effects of imposed environmental changes in growth of bacteria, utilisation of gaseous substrates in submerged culture, production of methane and value-added chemicals from org waste; *aquatic microbiol*: primary production in sea lochs, microbial flora of estuaries; *bacteria in relation to health and food*; interaction betwn micro-organisms important in food industry, mycotoxins, medical bacteriology, treatment of industrial, domestic and agricultural effluents, landfill; *fermentation technology*: fermentation processes, novel disc-fermenter, microbiol and biochem of food fermentations. Contact Professor JE Smith
- 63:39 Surrey, Microbiology**, MPhil/PhD
- 63:40 Thames Poly, Biological sciences**, MPhil/PhD (CNAAC)
- 63:41 Wales (Aberystwyth), Botany and microbiology**, MSc/PhD
- 63:42 Wales (Cardiff), Microbiology**, MSc/PhD
- 63:43 Wales (Swansea), Biological sciences**, MSc/PhD
- 63:44 Wales (UWIST), Applied biology**, MSc/PhD
- 63:45 Warwick, Microbiology**, MPhil/PhD



## 66 Food science and technology (including dietetics and nutrition)

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 66:1 Bath, *Microbiology*, MSc/PhD  
 66:2 Belfast, *Agricultural and food chemistry*, MAgr/MSc/PhD  
 66:2 Belfast, *Agricultural and food microbiology*, MAgr/MSc/PhD  
 66:4 Belfast, *Food science*, MSc/PhD  
 66:5 Birmingham, *Milling and brewing*, MSc/PhD  
 66:6 Bristol, *Agriculture and horticulture*, MSc/PhD  
 66:7 East Anglia, *Food science*, MPhil/PhD  
 66:8 Heriot-Watt, *Brewing and biological sciences*, MSc/PhD  
 66:9 Humber-side CHE (Hull), *Science and food technology*, MPhil/PhD (CNAAs various univs)  
 66:10 Leeds, *Food science*, MPhil/PhD: supervision available for research: interests incl: enzymes in foods in relation to effects on quality of fresh foods; fate during thermal food processing and methods of enzymatic analysis; chem of carbohydrate components of foods esppectins; rheological properties of cereal and colloidal food systems and laser light scattering of food emulsions; computer simulation of colloidal dispersions; interactions using radioactive isotopes between food additives and food components during processing; storage and preparation; light microscopy of meat, starches, emulsified foods and textured protein foods and histochemical studies on food components; problems in food engineering physics of mixing processes and math modelling of heat and mass transfer in food processing operations; studies on natural and synthetic food colouring agents in relation to structure, stability and reactivity; analysis and fate of nutrients, such as vitamins and additives during thermal processing; analysis and origin of flavour substances in raw materials and food products: Research Council studentships available. Contact Professor David S Robinson  
 66:11 Leeds Poly, *Dietetics*, MPhil/PhD (CNAAs)  
 66:12 London (KQC), *Food science*, MPhil/PhD  
 66:13 London (KQC), *Nutrition*, MPhil/PhD  
 66:14 Manchester Poly, *Food manufacture and distribution*, MPhil/PhD (CNAAs)  
 66:15 Nottingham, *Applied biochemistry and food science*, MPhil/PhD  
 66:16 Oxford Poly, *Catering management*, MPhil/PhD (CNAAs)  
 66:17 Poly of North London, *Food and biological sciences*, MPhil/PhD (CNAAs)  
 66:18 Reading, *Food science*, MPhil/PhD  
 66:19 Reading, *Food technology*, MPhil/PhD  
 66:20 Sheffield City Poly, *Hotel and catering studies and home economics*, MPhil/PhD (CNAAs)  
 66:21 South Bank Poly, *Applied biology and food science*, MPhil/PhD  
 66:22 Strathclyde, *Food science*, MSc/PhD: supervision available within Dept of Bioscience and Biotechnology; research interests incl: *lipid chem*: detailed lipid chem of cereals and cereal products, protein-lipid interactions in breadmaking; *starches*: chem and physical properties of cereal starches, swelling and gelatinisation, enzyme susceptibility, fine-structure and dimensions of starch granules, amylose-lipid complexes; *heat resistance of bacterial spores*: mechanisms that enable spores to survive high temps and estab of environments that reduce their heat resistance; *bacterial exoenzymes*: proteases and lipases of psychrophilic bacteria; *fluorochrome staining of bacteria*: development of new microscopical techniques based on direct staining of micro-organisms and fluorochromes; *food polysaccharides*: polysaccharides that play important role in rheology and texture of foodstuffs; *food flavours*: contributions of individual cpds and flavour notes to overall flavour and acceptability, mechanisms by which chem senses detect and interpret

amylase inhibitors Contact

66.23

66.24

# Instruction

66.25 Birmingham, *Brewing science*, MSc66.26 (good honours deg in biol sciences or its equivalent)   
 carcass anatomy biochem and

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66.35 Reading, *Food processes*, MSc66.36 Reading, *Food science*, MSc66.37 Reading, *Food technology*, MSc66.38 South Bank Poly, *Food analysis and composition*, MSc66.39 Strathclyde, *Food science and microbiology*, MSc

## Certificates and diplomas

66.40 Heriot Watt, *Brewing*, Diploma66.41 Humberide CHE (Hull), *Food technology*, Diploma66.42 Leeds, *Food science*, Diploma66.43 Leeds Poly, *Dietetics*, Diploma66.44 London (KQC), *Dietetics*, Diploma66.45 London (KQC), *Food resources related to community development*, Diploma66.46 Strathclyde, *Food composition and processing*, Diploma



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## FACULTY OF AGRICULTURE & FOOD

*M a s t e r s   D e g r e e s   a n d   D i p l o m a s*

### Postgraduate Courses (one or two years)

- Agricultural Economics MSc & Diploma ■ Agricultural Management MSc ■ Animal Production MSc & Diploma ■ Crop Physiology MSc
- Food & Agricultural Biotechnology MSc ■ Food Process Engineering MSc ■ Food Science MSc ■ Food Technology MSc ■ Grassland Science MSc ■ Soil Science MSc ■ Technology of Crop Protection MSc ■ Tropical Agricultural Development Diploma, MSc & MAgrSc

### *O t h e r   C o u r s e s*

**PhD (not less than 3 years) or MPhil (not less than 2 years)**

Higher degrees by research available in all the above areas and most other aspects of Agriculture

**Short Courses (1 week to 6 months)**

A range of short courses is available in Veterinary Epidemiology, Statistical Methods, Rodent Control, Soil and Plant Analysis and the Use of Computers in Livestock Development  
Courses in English available at the University

Enquiries concerning these courses should be addressed to The Assistant Registrar,  
Faculty of Agriculture and Food (C/D), No 2, Earley Gate, University of Reading,  
Whiteknights Road, Reading RG6 2AU, England, UK  
Telephone (0734) 875123 Ext 6388 Telex 847813



## University of Southampton

### Human Nutrition

**Degrees: PhD/MPhil**

The situation of the Human Nutrition group within the School of Biochemical and Physiological Sciences and within the Medical Faculty provides opportunities for research at the basic and applied levels

**Current areas of research interest:** protein metabolism in man, acute phase protein production, lactation, regulation of energy balance, brown adipose tissue, nutrient-CNS interactions, parenteral feeding effects on muscle function, free-radical metabolism

**Applications and enquiries to:**  
Professor A A Jackson, Human Nutrition (SOBAPS), University of Southampton Highfield, Southampton SO9 5NH

## Overseas students

See editorial on  
page 7 onwards  
for information on  
UK postgraduate  
study



### **Certificates and diplomas**

- 67:25 Aberdeen, *Land economy*, Diploma
- 67:26 Cranfield (Silsoe), *Land resources planning*, Diploma
- 67:27 Edinburgh, *Landscape studies*, Diploma
- 67:28 Leeds Poly, *Landscape architecture*, Diploma
- 67:29 Manchester Poly, *Landscape architecture*, Diploma

## 68 Medical and dental sciences

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

- 68 1 Aberdeen, *Anatomy*, MSc/PhD See page 298
- 68 2 Aberdeen, *Bacteriology*, PhD
- 68 3 Aberdeen, *Biomedical physics and bioengineering* MSc/PhD
- 68 4 Belfast, *Medical and dental sciences*, MSc/PhD
- 68 5 *Dentistry*, MSc/PhD
- 68 6 *Medicine*, MSc/PhD
- 68 7 *Pathology*, MSc/PhD

adenoviruses and Epstein Barr virus molecular and cell biol of virus-cell interactions immune

- 68 8 Birmingham, *Clinical chemistry*, MSc/PhD
- 68 9 Birmingham, *Clinical genetics*, MSc/PhD
- 68 10 Birmingham, *Immunology*, MSc/PhD
- 68 11 Birmingham, *Medical microbiology*, MSc/PhD
- 68 12 Birmingham, *Paediatrics and child health* MSc/PhD
- 68 13 Birmingham, *Social medicine*, MSc/PhD
- 68 14 Birmingham, *Surgery*, MSc/PhD
- 68 15 Birmingham Poly, *Health sciences*, MPhil/PhD (CNA)
- 68 16 Bradford, *Biomedical sciences* MPhil/PhD
- 68 17 Bristol, *Anaesthesia*, MSc/PhD
- 68 18 Bristol, *Anatomy* MSc/PhD
- 68 19 Bristol, *Community health* MSc/PhD
- 68 20 Bristol, *Dentistry*, MDS/MSc/PhD
- 68 21 Bristol, *Laryngology, rhinology and otology*, MSc/PhD
- 68 22 Bristol, *Medicine*, MSc/PhD
- 68 23 Bristol, *Mental health*, MSc/PhD
- 68 24 Bristol, *Obstetrics and gynaecology*, MSc/PhD
- 68 25 Bristol, *Ophthalmology*, MSc/PhD
- 68 26 Bristol, *Pathology*, MSc/PhD
- 68 27 Bristol, *Radiodiagnosis*, MSc/PhD
- 68 28 Bristol, *Surgery* MSc/PhD
- 68 29 Brunel, *Biology*, MPhil/PhD
- 68 30 Cambridge, *Anatomy*, MSc/PhD
- 68 31 Cambridge, *Clinical biochemistry*, MSc/PhD
- 68 32 Cambridge, *Clinical oncology and radiotherapeutics*, MSc/PhD
- 68 33 Cambridge, *Community medicine* MSc/PhD
- 68 34 Cambridge, *Haematological medicine*, MSc/PhD
- 68 35 Cambridge, *Medicine*, MSc/PhD
- 68 36 Cambridge, *Obstetrics and gynaecology*, MSc/PhD
- 68 37 Cambridge, *Paediatrics*, MSc/PhD

- 68:38 Cambridge, *Pathology*, MSc/PhD
- 68:39 Cambridge, *Psychiatry*, MSc/PhD
- 68:40 Cambridge, *Radiology*, MSc/PhD
- 68:41 Cambridge, *Surgery*, MSc/PhD
- 68:42 City, *Clinical communication studies*, MPhil/PhD
- 68:43 Dorset IHE (Poole), *Nursing and social service*, MPhil/PhD (CNA)
- 68:44 Dundee, *Anaesthesia*, MMSc/PhD
- 68:45 Dundee, *Anatomy*, MMSc/PhD
- 68:46 Dundee, *Biochemical medicine*, MMSc/PhD
- 68:47 Dundee, *Child health*, MMSc/PhD
- 68:48 Dundee, *Community medicine*, MMSc/PhD
- 68:49 Dundee, *Conservative dentistry*, MDSc/PhD
- 68:50 Dundee, *Dental prosthetics*, MDSc/PhD
- 68:51 Dundee, *Dental surgery*, MDSc/PhD
- 68:52 Dundee, *Dermatology*, MMSc/PhD
- 68:53 Dundee, *Medical education*, MSc/PhD
- 68:54 Dundee, *Medical microbiology*, MSc/PhD
- 68:55 Dundee, *Medicine (including cardiology)*, MMSc/PhD
- 68:56 Dundee, *Obstetrics and gynaecology*, MMSc/PhD
- 68:57 Dundee, *Ophthalmology*, MMSc/PhD
- 68:58 Dundee, *Orthodontics and child dental health*, MDSc/PhD
- 68:59 Dundee, *Orthopaedic and traumatic surgery*, MMSc/PhD
- 68:60 Dundee, *Pathology*, MMSc/PhD
- 68:61 Dundee, *Periodontology and community dentistry*, MDSc/PhD
- 68:62 Dundee, *Psychiatry*, MMSc/PhD
- 68:63 Dundee, *Surgery*, MMSc/MSSc/PhD
- 68:64 Edinburgh, *Child life and health*, MPhil/PhD
- 68:65 Edinburgh, *Clinical chemistry*, MPhil/PhD
- 68:66 Edinburgh, *Clinical surgery*, MPhil/PhD
- 68:67 Edinburgh, *Dermatology*, MPhil/PhD
- 68:68 Edinburgh, *Genito-urinary medicine*, MPhil/PhD
- 68:69 Edinburgh, *Immunology and immunopathology*, MPhil/PhD
- 68:70 Edinburgh, *Obstetrics and gynaecology*, PhD
- 68:71 Edinburgh, *Orthopaedic surgery*, MPhil/PhD
- 68:72 Edinburgh, *Surgery*, MPhil/PhD
- 68:73 Glasgow, *Dentistry*, MSc(MedSci)/PhD
- 68:74 Glasgow, *Medicine*, MSc(MedSci)/PhD
- 68:75 Hull, *Nursing studies*, MSc/MPhil/PhD
- 68:76 Keele, *Biological sciences*, MSc/PhD
- 68:77 Keele, *Communication and neuroscience*, MSc/PhD
- 68:78 Leeds, *Anatomy*, MPhil/PhD, supervision available; areas of research interest. development and growth of skeletal system, biomechanics of vertebral column; structure and function of pituitary gland, locomotory behaviour of cells in culture, changes in skeletal muscle in muscular dystrophies regeneration in CNS, human evolution, specific projects being undertaken investigation of structure of cartilage in chondrodystrophic mice, formation of osteophytes in abnormally stressed vertebral column, contact induced spreading of epithelial cells in culture, organ culture and cytology of pituitary gland, use of complex methods of shape analysis in interpretation of fossil evidence Contact Professor WJ Moore
- 68:79 Leeds, *Cardiovascular studies*, MPhil/PhD, supervision available, current research inc. cardiac receptors and reflexes, dynamics of heart, nervous mechanisms of cardiovascular control, reflex control of veins, exercise physiol in normal and diseased man, non-invasive investigation of patients with cardiac disease Contact Dr PN McWilliam
- 68:80 Leeds, *Chemical pathology*, MPhil/PhD
- 68:81 Leeds, *Clinical medicine*, MPhil/PhD
- 68:82 Leeds, *Dentistry*, MDSc/PhD

- 68.83 studies of visual perception and image processing radionuclide imaging, applications of electronics and microcomputers to clinical research interactions of ultrasound with biol materials ultrasonic diagnosis of arterial disease Contact Dr MS Chesters
- 68.84 Leeds Poly, *Health and applied sciences*, MPhil/PhD (CNA)
- 68.85 Leicester, *Anaesthesia*, MPhil/PhD
- 68.86 Leicester, *Anatomy*, MPhil/PhD
- 68.87 Leicester, *Medicine*, MPhil/PhD
- 68.88 Leicester, *Pathology*, MD/MPhil/PhD
- 68.89 Leicester, *Psychiatry*, MPhil/PhD
- 68.90 Leicester, *Surgery*, MPhil/PhD
- 68.91 Liverpool, *Medical microbiology*, MSc/PhD/MD
- 68.92 Liverpool, *Tropical medicine*, PhD
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- neurophysiol, neurosurgical surgery, neuro-otology, radiology, clinical neurophysiol exptl
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- 68:111 London (Guy's & St Thomas'), *Medical sciences*, MSc/PhD
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- 68.119 Manchester, *Dentistry*, MSc/PhD
- 68:120 Manchester, *Medical biophysics*, MSc/PhD
- 68:121 Manchester, *Medicine*, MSc/PhD
- 68:122 Newcastle, *Medicine and dentistry*, MSc/MDS/PhD
- 68:123 NE London Poly, *Paramedical sciences*, MPhil/PhD (CNA)
- 68:124 Nottingham, *Medical sciences*, MPhil/PhD
- 68:125 Oxford, *Anaesthetics*, MSc/DPhil
- 68:126 Oxford, *Anatomy*, MSc/DPhil
- 68:127 Oxford, *Cancer research*, MSc/DPhil
- 68:128 Oxford, *Cardiovascular medicine*, MSc/DPhil

- 68:129 Oxford, *Clinical biochemistry*, MSc/DPhil  
 68:130 Oxford, *Clinical medicine*, MSc/DPhil  
 68:131 Oxford, *Clinical neurology*, MSc/DPhil  
 68:132 Oxford, *Clinical pathology*, MSc/DPhil  
 68:133 Oxford, *Community medicine and general practice*, MSc/DPhil  
 68:134 Oxford, *Experimental psychology*, MSc/MLitt/DPhil  
 68:135 Oxford, *Obstetrics and gynaecology*, MSc/DPhil  
 68:136 Oxford, *Ophthalmology*, MSc/DPhil  
 68:137 Oxford, *Orthopaedic surgery and traumatology*, MSc/DPhil  
 68:138 Oxford, *Paediatrics*, MSc/DPhil  
 68:139 Oxford, *Pathology*, MSc/DPhil  
 68:140 Oxford, *Psychiatry*, MSc/DPhil  
 68:141 Oxford, *Radiology*, MSc/DPhil  
 68:142 Oxford, *Surgery*, MSc/DPhil  
 68:143 Poly of Central London, *Biomedical research*, MPhil/PhD (CNAAB)  
 68:144 St Andrews, *Anatomy and experimental pathology*, MSc/PhD  
 68:145 Sheffield, *Anaesthetics*, MMedSci/PhD  
 68:146 Sheffield, *Anatomy and cell biology*, MMedSci/MPhil/PhD  
 68:147 Sheffield, *Community medicine*, MMedSci/PhD  
 68:148 Sheffield, *Dental studies*, MMedSci/PhD  
 68:149 Sheffield, *Medical physics and clinical engineering*, MMedSci/PhD  
 68:150 Sheffield, *Medicine*, MMedSci/PhD  
 68:151 Sheffield, *Obstetrics and gynaecology*, MMedSci/PhD  
 68:152 Sheffield, *Ophthalmology*, MMedSci/PhD  
 68:153 Sheffield, *Orthopaedics*, MMedSci/PhD  
 68:154 Sheffield, *Paediatrics*, MMedSci/PhD  
 68:155 Sheffield, *Pathology*, MMedSci/PhD  
 68:156 Sheffield, *Psychiatry*, MMedSci/PhD  
 68:157 Sheffield, *Surgery*, MMedSci/PhD  
 68:158 Southampton, *Anaesthetics*, MPhil/PhD  
 68:159 Southampton, *Biochemical and physiological sciences*, MPhil/PhD  
 68:160 Southampton, *Chemical pathology and human metabolism*, MPhil/PhD  
 68:161 Southampton, *Child health*, MPhil/PhD  
 68:162 Southampton, *Community medicine and medical statistics*, MPhil/PhD  
 68:163 Southampton, *Environmental epidemiology*, MPhil/PhD  
 68:164 Southampton, *Geriatric medicine*, MPhil/PhD  
 68:165 Southampton, *Haematology*, MPhil/PhD  
 68:166 Southampton, *Health care evaluation*, MPhil/PhD  
 68:167 Southampton, *Human morphology*, MPhil/PhD  
 68:168 Southampton, *Human reproduction and obstetrics*, MPhil/PhD  
 68:169 Southampton, *Medical oncology*, MPhil/PhD  
 68:170 Southampton, *Medicine*, MPhil/PhD  
 68:171 Southampton, *Microbiology*, MPhil/PhD  
 68:172 Southampton, *Orthopaedic surgery*, MPhil/PhD  
 68:173 Southampton, *Pathology*, MPhil/PhD  
 68:174 Southampton, *Primary medical care*, MPhil/PhD  
 68:175 Southampton, *Psychiatry*, MPhil/PhD  
 68:176 Southampton, *Rehabilitation*, MPhil/PhD  
 68:177 Southampton, *Renal medicine*, MPhil/PhD  
 68:178 Southampton, *Surgery*, MPhil/PhD  
 68:179 South Bank Poly, *Nursing and community health studies*, MPhil/PhD (CNAAB)  
 68:180 Strathclyde, *Immunology*, MSc/PhD; supervision available: research interests inc: *control of autoimmunity in animals and man*; use of protein and steroid hormones in immunoregulation; development of new cpds with novel profiles; *monoclonal antibodies*: rodent, for use as immunodiagnostic agents in the detection of bacterial infections, pregnancy/cancer serum pro-

*immunoparasitology* immunological aspects and vaccine development in Leishmaniasis *human T lymphocyte hybrids* identification of lymphokines responsible for control of B-cell growth and differentiation and induction of suppressor T-cells in kidney disease *Contact* Professor WH Stimson

- 68 181 **Strathclyde, Pharmacy** MSc/PhD  
 68 182 **Surrey, Biochemistry** MPhil/PhD  
 68 183 **Surrey, Industrial and environmental health and safety** MPhil/PhD  
 68 184 **Thames Poly, Biological sciences and environmental health** MPhil/PhD (CNA)  
 68 185 **Trent Poly, Building and environmental health** MPhil/PhD (CNA)  
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 68 210 **Wales (C of Medicine), Tuberculosis and chest diseases** MSc/PhD

## Higher degrees by instruction

*Cand. dates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 68 211  
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 68 215 **Aberdeen, Psychotherapy** MMedSci  
 68 216 **Birmingham, Clinical psychology** MSc  
 68 217 **Birmingham, Immunology** MSc  
 68 218 **Birmingham, Toxicology** MSc

*See page 297*



- 68:219 **Bristol**, *Dentistry*, MSc
- 68:220 **Bristol**, *Medical building design*, MSc/Diploma
- 68:221 **Brunel**, *Applied immunology*, MSc/Diploma
- 68:222 **Cambridge**, *History of medicine*, MPhil
- 68:223 **Dundee**, *Analytical biochemistry*, MSc, 1 yr f-t; course covering such analytical techniques as chromatography (glc, tlc, hplc), mass spectrometry (GC-MS, LC-MS), radio-isotope techniques and immuno-assay, centrifugal fast analysers, automated analysis, photometric and electrochem methods illustrating their application in biomedical sciences: **Contact** Dr JD Baty
- 68:224 **Dundee**, *Dental science*, MDS
- 68:225 **Dundee**, *Environmental health*, MSc
- 68:226 **Dundee**, *Medical science*, MMS
- 68:227 **Dundee**, *Public health*, MPH
- 68:228 **Edinburgh**, *Clinical psychology*, MPhil
- 68:229 **Edinburgh**, *Community health*, MSc/Diploma
- 68:230 **Edinburgh**, *Nursing administration*, MSc/Diploma
- 68:231 **Edinburgh**, *Nursing education*, MSc/Diploma
- 68:232 **Edinburgh**, *Psychiatry*, MPhil
- 68:233 **Exeter**, *Clinical psychology*, MSc
- 68:234 **Glasgow**, *Clinical psychology*, MAppSci
- 68:235 **Glasgow**, *Forensic toxicology*, MSc/Diploma
- 68:236 **Glasgow**, *Medical sciences*, MSc(MedSci)
- 68:237 **Leeds**, *Cardiovascular studies*, MSc
- 68:238 **Leeds**, *Clinical biochemistry*, MSc
- 68:239 **Leeds**, *Clinical psychiatry*, MMedSc
- 68:240 **Leeds**, *Clinical psychology*, MSc, 2 yrs f-t; abnormal and clinical psychol, psychiatry, biol bases of behaviour; *course inc*: assessment, therapeutic and research methods; clinical experience under supervision in local hospitals (recognised by DHSS as basic professional training). **Contact** Dr N Sheehy
- 68:241 **Leeds**, *Dental surgery*, MDS
- 68:242 **Leeds**, *General practice*, MMedSc
- 68:243 **Leeds**, *Medical physics*, MSc, 2 yrs f-t or p-t (hons deg in physics or equiv req); p-t students should be employed in hospital dept or similar inst in N England; *syllabus*: inc radiation physics and dosimetry, anatomy and physiol, disease in man, physics in radiotherapy and radiodiagnosis, medical imaging, nuclear medicine, ultrasonics, radiobiol, radiation and gen hospital safety, medical electronics, physiol measurement, stats, digital computing; plus practical work, project and exam. **Contact** Dr MS Chesters
- 68:244 **Leeds**, *Public health*, MPH
- 68:245 **Leeds**, *Steroid endocrinology*, MSc
- 68:246 **Leicester**, *Clinical psychology*, MSc
- 68:247 **Leicester**, *Medical statistics and information technology*, MSc/Diploma
- 68:248 **Liverpool**, *Applied parasitology and medical entomology*, MSc/MVSc
- 68:249 **Liverpool**, *Clinical psychology*, MPPsychol
- 68:250 **Liverpool**, *Community health*, MCommH
- 68:251 **Liverpool**, *Tropical medicine*, MSc
- 68:252 **London (Cardiothoracic Inst)**, *Human and applied physiology*, MSc
- 68:253 **London (Inst Neurology)**, *Human communication*, MSc
- 68:254 **London (Inst Neurology)**, *Neurochemistry*, MSc
- 68:255 **London (Inst Ophthalmology)**, *Neurochemistry*, MSc
- 68:256 **London (Inst Orthopaedics)**, *Orthopaedics*, MSc
- 68:257 **London (Inst Psychiatry)**, *Clinical psychology*, MPhil
- 68:258 **London (Inst Psychiatry)**, *Neurochemistry*, MSc
- 68:259 **London (Inst Psychiatry)**, *Psychiatry*, MPhil
- 68:260 **London (Inst Psychiatry)**, *Quantitative methods in behavioural science*, MSc
- 68:261 **London (KQC)**, *Forensic science*, MSc
- 68:262 **London (KQC)**, *Immunology*, MSc
- 68:263 **London (KQC)**, *Medical immunology*, MSc

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68 301	Manchester, <i>Computational methods in medical science</i>	MSc
68 302	Manchester, <i>Dentistry</i>	MSc
68 303	Manchester, <i>Nursing</i>	MSc
68 304	Manchester, <i>Occupational hygiene</i>	MSc
68 305	Manchester, <i>Psychiatry</i>	MSc
68 306	"	"
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68 308	"	"
68 309	"	"
68 310	NE London Poly, <i>Biochemical immunology</i>	MSc
68 311	NE London Poly, <i>Clinical psychology</i>	MSc (CNA)
68 312	"	"
68 313	"	"
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developmental psychol, therapeutic techniques, conditioning and learning, psychopathology, child psychiatry, research skills, psychophysiol; psychobiol, adolescence and middle yrs, biol bases of psychol disorders, therapeutic techniques; neuropsychology, adult psychiatry, options, personality, phil of science, applied social psychol, therapeutic techniques; clinical neurology, psychophysiol, options, psychopharmacotherapy, psychopathology, geropsychology, therapeutic techniques, assessment methods inc exams, coursework, case reports, clinical supervisor's reports, project report. Contact Academic Registrar

68:315 Sheffield, *Anatomy and cell biology*, MMedSci

68:316 Sheffield, *Oral pathology*, MMedSci

68:317 Sheffield, *Oral surgery*, MMedSci

68:318 Sheffield, *Orthodontics*, MMedSci

68:319 Southampton, *Audiology*, MSc/Diploma Certificate

68:320 Southampton, *Rehabilitation studies*, MSc

68:321 Strathclyde, *Forensic science*, MSc/Diploma, 1c-2c yrs f-t (MSc), 9 mths f-t (Diploma) (hons deg in biol, biochem, chem, pharmacy, physiol or equiv req); *course content*: chem, toxicology, serology, study of hairs, fibres and vegetation and of questioned documents; applications and techniques, interpretation of data, presentation of evidence in court, phil of forensic scientist's approach to case, lab work, practical application of techniques, sp emphasis on investigation of materials from actual or simulated cases, presentation of technical and court reports; period of attachment (usually 4 weeks) to operational forensic science lab; exam, assessment of coursework, report. Contact Professor WJ Tilstone

68:322 Surrey, *Clinical biochemistry*, MSc

68:323 Surrey, *Clinical psychology*, MSc

68:324 Surrey, *Medical microbiology*, MSc/Diploma

68:325 Surrey, *Medical physics*, MSc/Diploma

68:326 Surrey, *Medical psychology*, MSc/Diploma, 1c yr f-t (hons deg in psychol or equiv qual and background in science req); specialised training for psychol grads with clinical interests to work in hospital units and medical research centres; aims to give thorough grounding in medical psychol and experience in various medical specialities in which psychol is currently being applied, does not inc practical clinical training, *course content*: research, teaching techniques, health education, medical specialities, professional inter-personal skills; exam, coursework, dissertation for MSc. Contact Dr H McGurk

68:327 Surrey, *Toxicology*, MSc

68:328 Ulster, *Medical laboratory sciences*, MSc

68:329 Ulster, *Nursing studies*, MSc

68:330 Wales (C of Medicine), *Medical microbiology*, MSc

68:331 Wales (C of Medicine), *Nursing studies*, MN

68:332 Warwick, *Psychotherapy*, MSc

## Certificates and diplomas

68:333 Aberdeen, *Immunology*, Diploma

68:334 Aberdeen, *Medical radiodiagnosis*, Diploma

68:335 Aberdeen, *Psychotherapy*, Diploma

68:336 Birmingham Poly, *Advanced clinical studies (speech therapy)*, Diploma

68:337 City, *Clinical communication studies*, Diploma

68:338 Dundee, *Odontology*, Diploma

68:339 Edinburgh, *Medical radiodiagnosis*, Diploma

68:340 Edinburgh, *Medical radiotherapy*, Diploma

68:341 Liverpool, *Tropical child health*, Diploma

68:342 London (Cardiothoracic Inst), *Cardiac medicine*, Diploma

68:343 London (Cardiothoracic Inst), *Thoracic medicine*, Diploma

68:344 London (Inst Dermatology), *Dermatology*, Diploma

68:345 London (Inst Neurology), *Clinical neurology*, Diploma

68:346 London (KQC), *Medical ethics and law*, Diploma

68:347 London (LSH and TM), *Human and clinical genetics*, Diploma

68:348 London (LSH and TM), *Medical microbiology*, School Diploma

# University of Aberdeen

## MSc Medical Physics

available)

The Department also offers a nine-month course for a Diploma in Medical Physics. These qualifications are inadequate for the MSc degree.

## MSc Information Technology (Medical Physics)

An alternative course with the same general structure as above but with a strong emphasis on science, information processing, and medical physics.

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specific projects  
methylation  
therapy medicinal  
and toxicology  
very clinical phar  
electronic structure  
reptocoll endocar  
earch psychotropic  
tal studies. Contact Dr

further details available on application to: The Admissions Secretary,  
Physics and Bio-Engineering, Forehill, Aberdeen AB9 22D Telephone 0476 222222



## LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(Affiliated to the University of Liverpool)

The School, a registered charity, was founded in 1905. Its objectives are to teach the aspects of tropical medicine and to conduct research.

Postgraduate students are accepted for the following taught courses leading to Liverpool School Certificates:

## University of Aberdeen

### **ANATOMY**

**MSc/PhD**

Supervision available, opportunities for study and research in all aspects of anatomy inc histology, histochem, electron microscopy, morphometry, stereology; neurology research topics and interests: developmental neurobiol; diabetic neuropathy; diabetic nephropathy; functional morphology of placenta; biol anthropology; skeletal biol of past and present populations, development abnormalities of axial skeleton; structure and regeneration in muscle and tendon; structural organisation in small bowel; biol of human isolates; facilities inc operating and technical facilities for all standard computer-assisted techniques inc optical and electron microscopy, quantitative microscopy and image analysis.

**Contact: Professor E J Clegg**

**Department of Anatomy**

**University of Aberdeen, Marischal College  
Aberdeen AB9 1AS**

## UNIVERSITY OF LEEDS

### **DEPARTMENT OF CHEMICAL PATHOLOGY**

#### **MPhil/PhD by Research**

Supervision available in the following areas: haem biosynthesis, trace elements, auto-immunity of diabetes, pharmacokinetics, toxicology, sodium and water metabolism, nutrition, inherited metabolic variation, steroid biosynthesis, corticosteroid metabolism, information technology.

#### **MSc Clinical Biochemistry**

Designed to meet needs of graduate overseas students who wish to pursue a career in clinical biochemistry. One or two calendar years depending on initial qualifications. Formal teaching sessions are supplemented by laboratory training and a research project.

#### **MSc Steroid Endocrinology**

Designed for graduates who wish to undertake an in-depth study of steroid endocrinology. One or two calendar years depending on initial qualifications. Extensive practical research project and laboratory and tutorial teaching sessions.

**Further details available from: The Secretary,  
Department of Chemical Pathology, University  
of Leeds, Leeds LS2 9JT**

## UNIVERSITY OF KEELE

### **Research Department of Communication and Neuroscience**

*Opportunities for interdisciplinary postgraduate research in the following areas of study.*

**Auditory physiology and anatomy:** frequency selectivity, pitch, intensity, animal models of deafness; clinical applications, rehabilitation. **Visual psychophysics:** pattern recognition and discrimination; motion, acuity, mathematical modelling, colour vision, clinical applications. **Visual neurophysiology:** retina, cortex; pattern, texture, motion, relative motion; after-effects; correlation between physiology and anatomy. **Speech processing:** human perception, computer synthesis and recognition, lip-reading aids. **Neuroanatomy:** ultrastructure of the auditory system in normal and deaf animals, dye tracing of physiologically identified neurones. **Visual evoked potentials:** information processing in human visual cortex. **Clinical auditory psychophysics and evoked responses:** diagnosis, prevention and amelioration of sensorineural hearing loss. **Auditory psychophysics:** pitch and space perception, frequency-sweep adaptation, frequency analysis, otoacoustic emissions, tinnitus

*For further information, please contact Dr D H Foster, (Postgraduate Admissions), Department of Communication and Neuroscience, University of Keele, Keele, Staffordshire ST5 5BG*

## UNIVERSITY COLLEGE, LONDON

### **Department of Anatomy and Embryology**

This is one of the largest Biological Research Departments in the United Kingdom and is an ideal location for a training in biological research in terms of the breadth of sophisticated techniques available and the international reputations of the staff. Research covers a wide interdisciplinary spectrum with emphasis on neuroscience, development biology and cell biology, including mineralised tissue. Facilities and expertise are available for tissue culture, ultrastructural studies (incl SEM, TEM, freeze fracture, line emission X-ray and image analysis), immunohistochemistry, biochemical fractionation, electrophysiological, pharmacological and behavioural studies.

**MSc in Neurological Sciences** The course extends over one calendar year (commencing in October) and consists of lectures and a research project in an aspect of molecular, cellular, systems or behavioural neuroscience.

**MSc in Mineralised Tissue Biology** The course extends for 1 year (or 2 years part-time) commencing in October, and consists of three taught courses and a research project. The course is designed to cover hard tissue biology and its application in such fields as dentistry, medicine, zoology, veterinary medicine, anthropology and archaeology.

**MPhil/PhD** A research project leading to a doctorate, supervised by one of the 24 members of staff.

**Non-Degree Courses** are also available on practical laboratory experience.

*Further details from: Administrative Officer,  
Department of Anatomy and Embryology,  
University College London, Gower Street,  
London WC1E 6BT. Tel 01-387 7050 ext 303*

## 69 Pharmacy, pharmacology and pharmaceutical sciences

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

69.1 Aberdeen, *Clinical pharmacology*, PhD

69.2 Aberdeen, *Pharmacology*, MSc/PhD

69.3 Aston, *Pharmaceutical sciences*, MPhil/PhD, research in following areas: some specific projects named: mechanisms of drug toxicity; implications of metabolism of xenobiotic N-methyl moieties

microbiol. envelope of *Pseudomonas aeruginosa*, immunochem. studies of streptococcal endocarditis, drug mechanisms: nerve and muscle pathophysiol., cardiovascular research, psychotropic drugs, pharmacy practice, community pharmacy projects, clinical and hospital studies. Contact Dr JA Hickman.

69.4 Bath, *Pharmaceutical and medicinal chemistry*, MPhil/MSc/PhD

69.5 Bath, *Pharmaceutics*, MPhil/PhD. See page 302

69.6 Bath, *Pharmacology*, MPhil/PhD

69.7 Belfast, *Pharmacy*, MSc/PhD

69.8 Birmingham, *Pharmacology*, MSc/PhD

69.9 Birmingham, *Therapeutics and clinical pharmacology*, MSc/PhD

69.10 Bradford, *Pharmaceutical chemistry*, MPhil/PhD

69.11 Bradford, *Pharmacology*, MPhil/PhD

69.12 Bradford, *Pharmacy*, MPhil/PhD

69.13 Brighton Poly, *Pharmacy*, MPhil/PhD

69.14 Bristol, *Pharmacy*, MSc/PhD

69.15 Bristol, *Pharmacy*, MSc/PhD

69.16 Bristol, *Pharmacy*, MSc/PhD

69.17 Bristol, *Pharmacy*, MSc/PhD

69.18 Bristol, *Pharmacy*, MSc/PhD

69.19 Glasgow, *Pharmacology*, MSc/PhD

69.20 Hatfield Poly, *Biological and environmental sciences*, MPhil/PhD (CNA)

69.21 Heriot Watt, *Pharmacy*, MSc/PhD

69.22 Leeds, *Pharmacy*, MSc/PhD

69.23 Leeds, *Pharmacy*, MSc/PhD

69.24 Leeds, *Pharmacy*, MSc/PhD

69.25 Leeds, *Pharmacy*, MSc/PhD

69.26 Leeds, *Pharmacy*, MSc/PhD

69.27 Leeds, *Pharmacy*, MSc/PhD

69.28 Leeds, *Pharmacy*, MSc/PhD

69.29 Leeds, *Pharmacy*, MSc/PhD

69.30 Leeds, *Pharmacy*, MSc/PhD

69.31 Leeds, *Pharmacy*, MSc/PhD

69.32 Leeds, *Pharmacy*, MSc/PhD

69.33 London (UC), *Pharmacology*, MPhil/PhD

**69:34 London (Charing Cross and Westminster), Medicine**, MPhil/PhD

**69:35 London (Royal Free), Pharmacology**, MPhil/PhD

**69:36 Loughborough, Chemistry**, MPhil/PhD; inc medicinal chem; see Physical sciences: chemistry  
Contact GE Beck

**69:37 Manchester, Pharmacology**, MSc/PhD

**69:38 Manchester, Pharmacy**, MSc/PhD; supervision available, research interests inc: *medicinal chem* synthesis and structure-activity relationships of heterocyclic cpds having potential oncolytic, anti-fungal, anti-viral, analgesic anti-parkinsonism or cardiovascular activity, Fischer indolisations structure, activity relationships; *drug metabolism and toxicology*: possible role of reactive metabolites in initiation of toxic response; *pharmaceutical analysis*: correlation of molecular structure and luminescence characteristics; *natural products*: phytochem of medicinal plants and herbal medicines, plant cell cultures; *pharmaceutical microbiol*: mechanism of action of anti-microbials, bacterial drug resistance, control of sterilisation processes; *physical pharmacy*: physicochem properties of surfactants in soln; *biopharmaceutics*: physicochem factors influencing drug availability, controlled release of drugs in *in vivo* imaging, formulation of dermatologicals; *pharmacokinetics*: influence of route, dose, physiol and pathophysiol factors, structure on kinetics; extrapolation of *in vitro* to *in vivo*; development of math models; relationship to pharmacological and therapeutic response in animals and men; *radiation biol*: radiosensitisation of isolated cells by imidazole derivs. Contact Dr JT Fell

**69:39 Nottingham, Pharmacy**, MPhil/PhD

**69:40 Oxford, Clinical pharmacology**, MSc/DPhil

**69:41 Oxford, Pharmacology**, MSc/DPhil; research interests inc: chem, electrophysiol and morphological characterisation of neurons in brain and synaptic connections of such identified neurons (MRC Anatomical Neuropharmacological Unit); immunotoxicology; metabolism of cannabis and other centrally active drugs; (Wellcome Research Unit); electrophysiol and pharmacology of heart muscle; distribution and exchange of ions in smooth muscle and effect of drugs; electrophysiol of neuromodulation by proteins; neural control of blood vessels, neuronal connectivity in regions of brain of pharmacological interest, neuronal proteins; storage, re-uptake and release of neurotransmitter from nerve terminals and dendritic processes in CNS; peptidase enzymes in CNS extraction of neurohypophysial hormones from tissues and body fluids and measurement of their concentrations, action of drugs on neurohypophysis; medicinal chem synthesis of groups of compounds to produce compounds with novel pharmacological effects or to test theories of molecular mechanism of drug action. Contact Professor AD Smith, Dept of Pharmacology, South Parks Road, Oxford OX1 3QT

**69:42 Portsmouth Poly, Pharmacy**, MPhil/PhD (CNAA)

**69:43 Sheffield, Pharmacology and therapeutics**, MMedSci/PhD; supervision available, current research inc: metabolic effects of drug therapy; intermediary metabolism in disease; assessment of metabolic function of organs; drug control of immune response; effect of cancer on drug metabolism; regulation of gonadal function by gonadotrophins and cyclic nucleotides; clinical pharmacology and pharmacokinetics of anti-diabetic drugs, anti-hypertensive drugs, anti-arrhythmic drugs and local anaesthetics; metabolism of drugs in isolated perfused organs, modes of action and kinetics of anti-hypertensive drugs; utilisation of nutrients during parenteral nutrition; numeric assessment of nutritional status; interaction of drugs with metabolism and release of physiologically active amino acids in brain; identification of excitatory amino acid neurotransmitter receptors in CNS; identification and epidemiology of adverse drug reactions; prescription monitoring and therapeutic audit; diuretics and potassium metabolism; clinical pharmacology and pharmacokinetics of anti-leukaemic drugs; genetic control of drug metabolism in man; drug metabolism by human liver microsomes; genetic aspects of drug metabolism. Contact Professor H Woods

**69:44 Southampton, Pharmacology**, MPhil/PhD

**69:45 Strathclyde, Pharmacy**, MSc/PhD

**69:46 Strathclyde, Physiology and pharmacology**, MSc/PhD

**69:47 Sunderland Poly, Pharmaceutical sciences**, MPhil/PhD (CNAA)

**69:48 Wales (C of Medicine), Pharmacology and therapeutics**, MSc/PhD

**69:49 Wales (UWIST), Pharmacy**, MSc/MPharm/PhD See page 302

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 69.50  
69.51  
69.52  
69.53  
69.54  
69.55 **Glasgow, Medical sciences, MSc(MedSci)**  
69.56  
69.57  
69.58  
69.59  
69.60  
69.61  
69.62  
69.63  
69.64 **Manchester, Pharmaceutical analysis, MSc/Diploma, 1-2c yrs f t 2 yrs p-t min (MSc) 1 yr f t (Diploma), course inc analytical measurements, spectrophotometry, electrometric measure**  
69.65  
69.66  
69.67 **NE London Poly, Pharmacology, MSc (CNA)**  
69.68 **Southampton, Biochemical pharmacology, MSc**  
69.69 **Strathclyde, Clinical pharmacy, MSc**  
69.70 **Strathclyde, Pharmaceutical analysis, MSc/Diploma**  
69.71

toxic interactions between drugs, extrapolation from animals to man, design and conduct of volunteer and clinical trials, lab work. *Two main options:* 1) broadly based course giving gen training in pharmacology, or 2) gen pharmacology core with specialisation in either plant medicines or snake toxins. Contact Dr RM Wadsworth.

- 69.72 **Sunderland Poly, Pharmaceutical sciences, MSc (CNA)**  
69.73 **Sussex, Medical chemistry, MSc**  
69.74 **Wales (UWIST), Pharmaceutical sciences, MSc**

## Certificates and diplomas

- 69.75 **NE London Poly, Pharmacology, Diploma**  
69.76 **Sunderland Poly, Quality assurance, Diploma**



# UNIVERSITY OF BATH

## SCHOOL OF PHARMACY AND PHARMACOLOGY

**Pharmaceutical sciences, MPhil/PhD, research interests include**

**Pharmaceutics:** improved control of drug targeting and release from formulations and delivery devices, effects of formulatory adjuvants on stability of drug formulations, interaction between polymers and medicaments, effects of surfactants on stability and bioavailability of labile drugs, aspects of powder compaction and tablet film coating, utilisation of charge interactions to improve powder mixing, effects of particle shape and crystal modifications in pharmaceutical systems, microbiological preservation and safety of ophthalmic formulations including contact lens solutions, nature of repair of UV-induced DNA damage in cells using bacterial and human fibroblast cells in culture, use of bacteria to investigate mechanisms of co-carcinogenicity, activation and germination studies in bacterial spores, biotechnological transformation of drug molecules

**Pharmacology:** studies on circadian rhythms in neuro- and psycho-pharmacology, mode of action of anti-Parkinson drugs, anti-inflammatory and anti-arthritis drugs (including glucocorticoids), auto-immune phenomena in disease and assessment of immuno-suppressant sensitivity in diabetes mellitus, foetal pharmacology, studies in prostaglandin pharmacology, cardiovascular pharmacology, clinical pharmacology, aspects of anti-inflammatory drug metabolism and biodistribution.

**Pharmaceutical and medicinal chemistry:** sterically constrained transmitter agents, cholinergic agonists and antagonists, bio-active imidazolines, analgesic 6,7-benzomorphans and piperidines, marine natural products, anti-cancer uracils and pteridines, anti-histamines (H<sub>1</sub>), <sup>13</sup>C and <sup>1</sup>H nmr studies, pharmaceutical analysis, quantitative nmr and high performance liquid chromatography, determination of drugs in body fluids, metabolism and impurity/degradation profiles, mechanisms of microbiological transformation of drug substances, authentication of plant materials, development of isolation and analytical procedures, determination of chemical structure of plant products of value in pharmaceutical sciences

*For further information write to Professor J E Rees, School of Pharmacy and Pharmacology, University of Bath, Claverton Down, Bath BA2 7AY*

## University of Wales Institute of Science and Technology

### MSc/MPharm/PhD: Pharmacy

Supervision available. Current research interests include *Pharmaceutical chemistry and pharmacognosy*, enzyme inhibitors in drug design, analytical studies on synthetic drugs, synthesis and biotransformation in plant tissue culture, inflammatory and repair processes in skin, wound management products design, percutaneous absorption and membrane permeation kinetics, *pharmacology* mechanism of action of antidepressants, tranquilisers, analgesics (including dependence) anti-cancer agents and of drugs on myocardial and coronary artery function; the pulmonary effect of vegetable dusts, drug metabolism and pharmacokinetics, *pharmaceutics* bacterial resistance, tableting and encapsulation processes, colloidal drug delivery systems, controlled drug delivery and drug targeting, parenteral systems, mucoadhesive polymers and hydrogels, pulmonary formulations, *clinical and social pharmacy* development and evaluation of patient-oriented pharmaceutical services and patient education in hospital and community

*Further information from The Welsh School of Pharmacy, University of Wales Institute of Science and Technology, King Edward VII Avenue, Cardiff CF1 3XF*

# Addresses of institutions

are on pages  
479-508

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

- 70 1 Bristol, Veterinary medicine MSc/PhD
- 70 2 Bristol, Veterinary surgery, MSc/PhD
- 70 3 Cambridge, Clinical veterinary medicine MSc/PhD
- 70 4 Edinburgh, Veterinary physiology, MPhil/PhD
- 70 5 Edinburgh, Veterinary studies MPhil/PhD
- 70 6 Glasgow, Veterinary medicine PhD
- 70 7 Liverpool, Veterinary science MVSc/MAnimSc/PhD
- 70 8 London (Royal Veterinary), Veterinary science MPhil/PhD

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 70 9 Edinburgh, Animal health, MSc/Diploma
- 70 10 Edinburgh, Neurophysiology MSc/Diploma
- 70 11 Edinburgh, Public health (animal studies) MSc/Diploma
- 70 12 Edinburgh, Tropical animal production and health MSc/Diploma See page 304
- 70 13 Edinburgh, Tropical veterinary medicine MSc/Diploma See page 304
- 70 14 Edinburgh, Tropical veterinary science MSc/Diploma See page 304
- 70 15 Glasgow, Veterinary medicine, MSc(VetSci)/MVM/Diploma
- 70 16 Liverpool, Applied parasitology and medical entomology MSc/MVSc
- 70 17 London (Royal Veterinary), Animal health MSc
- 70 18 London (Royal Veterinary), Laboratory animal science MSc
- 70 19 London (Royal Veterinary), Veterinary pathology, MSc
- 70 20 Stirling, Aquatic pathobiology, MSc/Diploma
- 70 21 Stirling, Aquatic veterinary studies, MSc/Diploma
- 70 22 Surrey, Veterinary microbiology, MSc/Diploma
- 70 23 Wales (Bangor), Animal parasitology, MSc/Diploma

# UNIVERSITY OF BATH

## SCHOOL OF PHARMACY AND PHARMACOLOGY

**Pharmaceutical sciences, MPhil/PhD, research interests include**

**Pharmaceutics:** improved control of drug targeting and release from formulations and delivery devices, effects of formulatary adjuvants on stability of drug formulations, interaction between polymers and medicaments, effects of surfactants on stability and bioavailability of labile drugs, aspects of powder compaction and tablet film coating, utilisation of charge interactions to improve powder mixing, effects of particle shape and crystal modifications in pharmaceutical systems, microbiological preservation and safety of ophthalmic formulations including contact lens solutions, nature of repair of UV-induced DNA damage in cells using bacterial and human fibroblast cells in culture, use of bacteria to investigate mechanisms of co-carcinogenicity, activation and germination studies in bacterial spores, biotechnological transformation of drug molecules

**Pharmacology:** studies on circadian rhythms in neuro- and psycho-pharmacology, mode of action of anti-Parkinson drugs, anti-inflammatory and anti arthritic drugs (including glucocorticoids), auto-immune phenomena in disease and assessment of immuno-suppressant sensitivity in diabetes mellitus, foetal pharmacology, studies in prostaglandin pharmacology, cardiovascular pharmacology, clinical pharmacology, aspects of anti-inflammatory drug metabolism and biodistribution.

**Pharmaceutical and medicinal chemistry:** sterically constrained transmitter agents, cholinergic agonists and antagonists, bio-active imidazolines, analgesic 6,7-benzomorphans and piperidines, marine natural products, anti-cancer uracils and pteridines, anti histamines (H<sub>1</sub>), 13C and 1H nmr studies, pharmaceutical analysis, quantitative nmr and high performance liquid chromatography, determination of drugs in body fluids, metabolism and impurity/degradation profiles, mechanisms of microbiological transformation of drug substances, authentication of plant materials, development of isolation and analytical procedures, determination of chemical structure of plant products of value in pharmaceutical sciences

*For further information write to Professor J E Rees, School of Pharmacy and Pharmacology, University of Bath, Claverton Down, Bath BA2 7AY*

## University of Wales Institute of Science and Technology

### MSc/MPharm/PhD: Pharmacy

Supervision available. Current research interests include *Pharmaceutical chemistry and pharmacology* enzyme inhibitors in drug design, analytical studies on synthetic drugs synthesis and biotransformation in plant tissue culture, inflammatory and repair processes in skin, wound management products design, percutaneous absorption and membrane permeation kinetics, *pharmacology* mechanism of action of antidepressants, tranquilisers, analgesics (including dependence), anti-cancer agents and of drugs on myocardial and coronary artery function, the pulmonary effect of vegetable dusts, drug metabolism and pharmacokinetics, *pharmaceutics* bacterial resistance, tableting and encapsulation processes, colloidal drug delivery systems, controlled drug delivery and drug targeting, parenteral systems, mucoadhesive polymers and hydrogels, pulmonary formulations, *clinical and social pharmacy* development and evaluation of patient-oriented pharmaceutical services and patient education in hospital and community

*Further information from The Welsh School of Pharmacy, University of Wales Institute of Science and Technology, King Edward VII Avenue Cardiff CF1 3XF*

# Addresses of institutions

are on pages  
479-508

## 70 Veterinary studies

### Higher degrees by research

ate studies section

- 70 1 Bristol, Veterinary medicine MSc/PhD
- 70 2 Bristol, Veterinary surgery MSc/PhD
- 70 3 Cambridge, Clinical veterinary medicine MSc/PhD
- 70 4 Edinburgh, Veterinary physiology MPhil/PhD
- 70 5 Edinburgh, Veterinary studies MPhil/PhD
- 70 6 Glasgow, Veterinary medicine PhD
- 70 7 Liverpool, Veterinary science MVSc/MAnimSc/PhD
- 70 8 London (Royal Veterinary), Veterinary science MPhil/PhD

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 70 9 Edinburgh, Animal health MSc/Diploma
- 70 10 " " " " " "
- 70 11 " " " " " "
- 70 12 " " " " " " See page 304
- 70 13 Edinburgh, Tropical veterinary medicine MSc/Diploma See page 304
- 70 14 " " " " " "
- 70 15 " " " " " "
- 70 16 " " " " " "
- 70 17 " " " " " "
- 70 18 " " " " " "
- 70 19 " " " " " "
- 70 20 " " " " " "
- 70 21 " " " " " "
- 70 22 Surrey, Veterinary microbiology MSc/Diploma
- 70 23 Wales (Bangor), Animal parasitology MSc/Diploma

**UNIVERSITY OF EDINBURGH  
CENTRE FOR TROPICAL VETERINARY MEDICINE  
DIPLOMA/MSc POSTGRADUATE COURSES**

The following courses will be available

(i) **TROPICAL VETERINARY MEDICINE.** This course is designed for field veterinarians aiming at the senior and middle ranks of veterinary services in developing countries. It deals with the prevention and control of animal diseases at regional and national levels and has a strong epidemiological component. Related aspects of animal production and veterinary public health are also covered.

(ii) **TROPICAL VETERINARY SCIENCE.** This is a course for veterinarians, which is mainly concerned with the laboratory diagnosis of diseases of animals including poultry and wildlife in developing countries. It also includes the organisation and management of tropical veterinary laboratories and the epidemiology of the major diseases of animals.

(iii) **TROPICAL ANIMAL PRODUCTION AND HEALTH.** This course which is organised in conjunction with the University's Department of Agriculture is open to agriculture or veterinary graduates intending to specialise in animal production in developing countries. It provides a comprehensive review of the main constraints to animal production likely to be encountered in these countries with an indication of how they may be overcome.

Candidates are registered as Diploma/MSc students. All students take the same course from October to June. Students who attain a required standard in the June examination may continue for a further 3 months during which time they prepare and present a dissertation for the MSc degree. Students who do not reach this standard but who achieve the necessary marks will be awarded the Diploma and complete their studies in June. Students who do not reach the Diploma level in June may resit the Diploma examination in September.

Application forms and further information can be obtained from the Dean, Royal (Dick) School of Veterinary Studies, Summerhall, Edinburgh EH9 1QH, Scotland. Applications should be returned by March 31st (but preferably earlier as the courses are usually over-subscribed) for submission in the following October.

Any further details can be obtained from the Director of the Centre for Tropical Veterinary Medicine, Easter Bush, Roslin, EH25 9RG, Midlothian, Scotland.

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## **Research facilities and courses:**

### **III Physical sciences**

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*For institution addresses and further information sources, see the 'Institutions' section, starting on page 479.*

# 71 Mathematics (including OR and statistics)

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 71:1 Aberdeen, Mathematics, MSc/PhD**
- 71:2 Aberdeen, Statistics, MSc/PhD**
- 71:3 Aston, Mathematics and physics, MPhil/PhD**
- 71:4 Bath, Mathematics, MSc/PhD**
- 71:5 Belfast, Applied mathematics and theoretical physics, MSc/PhD**
- 71:6 Belfast, Engineering mathematics, MSc/PhD**
- 71:7 Belfast, Mathematics, MSc/PhD**
- 71:8 Belfast, Statistics and operational research, MSc/PhD**
- 71:9 Birmingham, Mathematics, MSc/PhD**
- 71:10 Birmingham, Statistics, MSc/PhD**
- 71:11 Bradford, Mathematical sciences, MPhil/PhD**
- 71:12 Brighton Poly, Mathematics, MPhil/PhD**
- 71:13 Bristol, Engineering mathematics, MSc/PhD**
- 71:14 Bristol, Mathematics, MSc/PhD; supervision available, research interests: *applied maths*:**  
fl mechanics and its environmental and geophysical applications; numerical analysis; *pure maths*:  
math logic and theory of computation, geometric measure theory, set theory, ring theory, dif-  
ferential topology, dynamical systems; *probability and stats*: applied probability and stochastic  
processes. Contact Dr EJ Walker
- 71:15 Bristol Poly, Computer studies and mathematics, MPhil/PhD (CNA)**
- 71:16 Brunel, Mathematical studies, MPhil/PhD**
- 71:17 Cambridge, Applied mathematics and theoretical physics, MSc/PhD; supervision available;**  
research gps working in: fl dynamics, dynamical oceanography, astrophysics, gen relativity and  
cosmology, elem particle physics, biol mechanics, colloid science, seismology, stat mechanics,  
atomic collision theory, numerical analysis, adv math methods; facilities inc: library with range of  
periodicals and monographs on physical science, computing facilities, on-line access to Univ  
computer, lab with workshop and photographic facilities for exptl work esp in fl dynamics. Contact  
Professor HK Moffatt
- 71:18 Cambridge, Pure mathematics and mathematical statistics, MSc/PhD**
- 1:19 City, Mathematics, MPhil/PhD**
- 1:20 City of London Poly, Mathematics and statistics, MPhil/PhD (CNA)**
- :21 City of London Poly, Statistics and operational research, MPhil/PhD (CNA)**
- 71:22 Coventry (Lanchester) Poly, Mathematics, MPhil/PhD (CNA)**
- 71:23 Coventry (Lanchester) Poly, Statistics and operational research, MPhil/PhD (CNA)**
- 71:24 Cranfield, Mathematics, MSc/PhD**
- 71:25 Derbyshire CHE (Derby), Mathematics, MPhil/PhD**
- 71:26 Dundee, Mathematical sciences, MSc/PhD**
- 71:27 Durham, Mathematics, MSc/PhD**
- 71:28 East Anglia, Mathematics, MPhil/PhD See page 315**
- 71:29 Edinburgh, Mathematics, MPhil/PhD**
- 71:30 Edinburgh, Statistics, MPhil/PhD; supervision available, research interests inc: design and**  
analysis of field expts, survey methodology, pattern recognition (involving ecol, medical and earth-  
satellite data), dynamics of spatial populations, spatial branching processes, stochastic models in  
agriculture, decision theory in animal breeding, stats in forensic science, analyses of qualitative

data and of directional data, Monte Carlo methods survival analysis demography Contact Dr CM Theobald

71 31 Essex, *Mathematics*, MSc/MPhil/PhD

71 32 Exeter, *Mathematical sciences*, MPhil/PhD See page 316

71 33 Glasgow, *Mathematics*, MSc/PhD supervision available research interests in following fields

71 34 Glasgow, *Statistics* MSc/PhD supervision available courses on stat methods and theory survival data, design of expts stochastic processes OR econometrics time series analysis of data stat

71 35 Heriot Watt, *Mathematics*, MSc/PhD (MSc in nonlocal mathematics joint with City of Edinburgh), MSc/PhD by research in algebra analysis (pure and applied) ord and partial differential eqns calculus of variations continuum mechanics (esp elasticity and inc qualitative theory of assoc differential eqns) mathematical physics (esp stat mechanics) stochastic processes numerical analysis (nonlinear wave problems and partial differential eqns) Contact Dr J Carr

71 36 Huddersfield Poly, *Computer studies and mathematics*, MPhil/PhD (CNA)

71 37 Hull, *Mathematics*, MSc/PhD supervision available recent interests pure maths stochastic analysis inc stochastic control theory non standard analysis and applications in probability theory functional analysis esp operator algebras gen topology applied maths relativity quantum mechanics scattering theory,  $\Omega$  mechanics heat transfer stats stochastic processes probabilistic modelling and probability on gps foundations of stat inference with sp ref to insight afforded by Bayesian concepts, a 1 yr diploma course giving entry quals for these research deg courses is available for less well-qualified candidates Contact Dr PE Kopp

71 38 Keele, *Mathematics*, MSc/PhD

71 39 Kent, *Mathematics*, MSc/MPhil/PhD

71 40 Kingston Poly, *Mathematics*, MPhil/PhD (CNA)

71 41 Lancaster, *Mathematics*, MPhil/PhD

71 42 Lancaster, *Operational research*, MPhil/PhD, supervision available most research has either

71 43

71 44 Leeds Pure mathematics MPhil/PhD supervision available current research interests

71 45 Leeds, *Statistics*, MPhil/PhD supervision available current research interests

71 46



- 71:47 Leicester, *Mathematics***, MPhil/PhD
- 71:48 Leicester Poly, *Mathematics, computing and statistics***, MPhil/PhD (CNA)
- 71:49 Liverpool, *Applied mathematics and theoretical physics***, MSc/PhD; supervision available; staff research interests: elasticity; non-Newtonian fls; water waves; fl mechanics; colorimetry; dynamical astronomy; dynamical systems; relativity; math models in biol, botany and geol; algebraic computing; representations of algebras and gps with applications to physics and differential eqns; supergps and assoc structures; super-symmetry; lattice gauge theories; nuclear physics; theory of metals and alloys; magnetic effects in solids; generalised Ising models and critical phenomena. Contact Mrs J Seed
- 71:50 Liverpool, *Pure mathematics***, MSc/PhD; supervision available, research interests in following fields: topology (esp 3-d), gp theory, representation theory of algebras, Kac-Moody Lie algebras and gps, algebraic geom, differential geom, dynamical systems, ergodic theory, potential theory, functional analysis,  $C^*$ -algebras and cyclic cohomology, also some emphasis on singularity theory with sp ref to: topology of unfoldings, topological stability, finite determinacy, gp actions and applications to differential geom. Contact Mrs AJ Newstead
- 71:51 Liverpool, *Statistics and computational mathematics***, MSc/PhD; supervision available, current research interests: *numerical analysis*: soln of partial differential eqns, integral eqns, ord differential eqns, variational methods, sparse matrix techniques and nonlinear optimisation; *OR*: graph theory, combinatorial programming, software eng, forecasting, combinatorial optimisation, simulation; *stats*: multivariate analysis and pattern recognition, non-linear regression; stat inference, industrial applications, stochastic process, forecasting, time series analysis, design of expts, biostatistics, reliability theory, stat genetics, survey methods and electoral prediction. Contact Professor L Delves
- 71:52 Liverpool Poly, *Mathematics***, MPhil/PhD (CNA)
- 71:53 London (Birkbeck), *Mathematics***, MPhil/PhD; supervision available in following: number theory, analysis, ergodic theory, ring theory, geometry and topology. Contact Dr RG Wilson
- 71:54 London (Birkbeck), *Statistics***, MPhil/PhD
- 71:55 London (Goldsmiths'), *Mathematics***, MPhil/PhD
- 71:56 London (Imperial), *Mathematics***, MPhil/PhD; supervision available for research in following topics: algebra (gp theory, representation theory, algebraic K-theory), combinatorics, number theory (algebraic, analytic, combinatorial and probabilistic), analysis (real and complex), functional analysis, global analysis, dynamical systems, theoretical fl mechanics, solid mechanics, quantum theory of solid state, relativity, numerical analysis, approximation theory, differential eqns, mathematical stats, applied stats, probability, stochastic processes and hist of mathematics: ample opportunity available for computational work with Imperial College CYBER and University of London CRAY computers. Contact Head of Department
- 71:57 London (KQC), *Mathematics***, MPhil/PhD See page 316
- 71:58 London (LSE), *Mathematics***, MPhil/PhD
- 71:59 London (LSE), *Operational research***, MPhil/PhD
- 71:60 London (LSE), *Statistics***, MPhil/PhD
- 71:61 London (Queen Mary), *Computer science and statistics***, MPhil/PhD
- 71:62 London (Queen Mary), *Mathematics***, MPhil/PhD
- 1:63 London (RHBC), *Mathematics***, MPhil/PhD
- 1:64 London (RHBC), *Statistics and computer science***, MPhil/PhD
- 1:65 London (UC), *Mathematics***, MPhil/PhD; supervision available in wide range of math subjs inc: algebra (ring theory and homological algebra), complex variable theory, convexity, functional analysis, gen and algebraic topology, geophysical fl mechanics, aerodynamics, meteorology, 2-phase flows, contact-line problems, boundary-layer theory, physiol flows, Stokes flows and hydrodynamic instability theory, theory of cracks, quantum electrodynamics, numerical analysis; Dept publishes journal *Mathematika*. Contact Professor EA Power
- 71:66 London (UC), *Statistical science***, MPhil/PhD
- 71:67 Loughborough, *Engineering mathematics***, MSc/MTech/PhD
- 71:68 Loughborough, *Mathematics***, MPhil/PhD
- 71:69 Manchester, *Decision theory***, MA(Econ)/PhD
- 71:70 Manchester, *Mathematics***, MSc/PhD
- 71:71 Manchester (UMIST), *Mathematics***, MSc/PhD
- 71:72 Manchester Poly, *Physics, mathematics and computing***, MPhil/PhD (CNA)
- 71:73 Napier C (Edinburgh), *Science***, MPhil/PhD (CNA)

- 71 74 Newcastle, *Engineering mathematics*, MSc/PhD  
 71 75 Newcastle, *Mathematics*, MSc/PhD  
 71 76 Newcastle Poly, *Mathematics and statistics* MPhil/PhD (CNAAB)  
 71 77 "  
 71 78 "  
 71 79 "  
 71 80 Nottingham, *Theoretical mechanics* MPhil/PhD  
 71 81 Open, *Mathematics* BPhil/MPhil/PhD  
 71 82 "  
 71 83 Oxford Poly, *Mathematics, statistics and computing*, MPhil/PhD  
 71 84 Paisley CT, *Mathematical sciences* MPhil/PhD (CNAAB)  
 71 85 "  
 71 86 "  
 71 87 Poly of North London, *Mathematics statistics and computing* MPhil/PhD (CNAAB)  
 71 88 Poly of Wales, *Mathematics and computer science* MPhil/PhD (CNAAB)  
 71 89 "  
 71 90 "  
 71 91 "  
 71 92 St Andrews, *Applied mathematics* MSc/PhD  
 71 93 St Andrews, *Pure mathematics*, MSc/PhD  
 71 94 St Andrews, *Statistics*, MSc/PhD  
 71 95 Salford, *Mathematics and computer science*, MSc/PhD  
 71 96 Sheffield, *Applied and computational mathematics*, MSc/PhD  
 71 97 Sheffield, *Probability and statistics* MSc/PhD  
 71 98 Sheffield, *Pure mathematics* MSc/PhD  
 71 99 "  
 71 100 "  
 71 101 "  
 71 102 Southampton, *Pure mathematics* MPhil/PhD  
 71 103 Southampton, *Statistics*, MPhil/PhD  
 71 104 South Bank Poly, *Mathematical sciences and computing*, MPhil/PhD (CNAAB)  
 71 105 Stirling, *Mathematics*, MSc/PhD  
 71 106 "

processes time series and prediction and control of animal diseases stat compu & systems and  
 ogy in medicine forensic science earth sciences psychol and teletraffic problems) systems and  
 control theory (analysis and computational methods for linear and nonl near modes of dynamic  
 processes) Contact Dr IA Murdoch

- 71 107 Strathclyde, *Operational research* MSc/PhD  
 71 108 Sunderland Poly, *Mathematics and computer studies* MPhil

- 71:109 Surrey, Mathematics**, MPhil/PhD
- 71:110 Sussex, Mathematics**, MPhil/DPhil *See page 315*
- 71:111 Sussex, Operational research**, MPhil/DPhil
- 71:112 Teesside Poly, Mathematics and statistics**, MPhil/PhD (CNA A)
- 71:113 Thames Poly, Mathematics, statistics and computing**, MPhil/PhD (CNA A)
- 71:114 Trent Poly, Mathematics, statistics and operational research**, MPhil/PhD (CNA A)
- 71:115 Ulster, Mathematics**, MPhil/DPhil
- 71:116 Wales (Aberystwyth), Applied mathematics**, MSc/PhD *See page 315*
- 71:117 Wales (Aberystwyth), Pure mathematics**, MSc/PhD *See page 315*
- 71:118 Wales (Aberystwyth), Statistics**, MSc/PhD *See page 315*
- 71:119 Wales (Bangor), Applied mathematics**, MSc/PhD
- 71:120 Wales (Bangor), Pure mathematics**, MSc/PhD
- 71:121 Wales (Cardiff), Applied mathematics and astronomy**, MSc/PhD
- 71:122 Wales (Cardiff), Computing mathematics**, MSc/PhD
- 71:123 Wales (Cardiff), Mathematical statistics and operational research**, MSc/PhD
- 71:124 Wales (Cardiff), Pure mathematics**, MSc/PhD
- 71:125 Wales (Swansea), Mathematics**, MA/MSc/PhD; supervision available; research interests: *applied maths*: stat mechanics and thermodynamics, graph theory and combinatorics, hydrodynamics (all branches inc flow of non-Newtonian liqs), elasticity (inc problems of elastico-viscous flow) functional integrals, stochastic processes and quantum mechanics; *pure maths*: functional analysis harmonic analysis, complex analysis, topology, combinatorial maths, algebraic geom, theory of probability, math logic; MA available in pure maths only. **Contact** Admissions Tutor
- 71:126 Wales (Swansea), Management science and statistics**, MSc/PhD
- 71:127 Wales (UWIST), Mathematics**, MSc/PhD
- 71:128 Warwick, Applied mathematics**, MSc/PhD
- 71:129 Warwick, Mathematics**, MSc/PhD; research supervision available in gps, algebraic gps, gps of Lie type, representations, rings, Lie algebras, algebraic geom, differential geom, hyperbolic geom Kleinian gps, algebraic topology, differentiable manifolds, foliations, symplectic geom, operator algebras, global analysis, ergodic theory, coding, harmonic analysis, stochastic differential eqns singularities, dynamical systems, catastrophe theory, pure and applied dynamical systems, computation, hist of maths; MSc taken as yr 1 qual exam. **Contact** Professor RW Carter
- 71:130 Warwick, Statistics**, MPhil/PhD
- 71:131 York, Mathematics**, MPhil/DPhil; supervision available, main areas for grad work: algebra analysis, differential eqns, gen relativity, quantum mechanics, theory of numbers; individual staff interests inc: differential analysis, math physics; relativity theory; complex analysis; e-m theory and differential eqns; abstract algebra and combinatorics; optimisation; numerical analysis; gen relativity; quantum theory of atomic and molecular structure; number theory and topology; semigroups; analytical number theory and analysis; number theory and combinatorics; probability theory; measure theory, probability and traffic flow; quantum theory. **Contact** Professor AM Arthurs

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 71:132 Aberdeen, Mathematics**, MSc
- 71:133 Bath, Numerical analysis**, MSc
- 71:134 Bath, Statistics**, MSc
- 71:135 Birmingham, Operational research**, MSc, 1c yr f-t: provides adv education and training for grads with experience in industry, commerce or govt who intend to take up career in OR; *course content*: OR techniques (decision theory, combinatorics, queues, math programming, theory of games, stock control models, operational gaming, renewal and replacement theory, bidding and gaming, information theory, network theory, plus case studies and practical projects), math stats (stat inference, parametric and non-parametric tests of significance, estimation, design of expts, multiple regression, theory of probability), computers (digital computers and several programming langs inc a simulation lang and computer-based solns to OR problems), production management

- 71 136** Bristol, *Mathematical logic and the theory of computation* MSc 1c yr ft (some math logic knowledge advantageous) alternate yrs next entry 1987 course content recursive functions set theory model theory category theory proof theory complexity subrecursive functions formal langs correctness of programs lang PROLOG logic programming higher order logic independence in arithmetic Topoi Contact Dr EJ Walker
- 71 137** Brunel, *Numerical analysis* MSc/Diploma
- 71 138** Brunel, *Statistics* MSc/Diploma
- 71 139** Cambridge, *Control engineering and operational research* MPhil
- 71 140** " " " " " "
- 71 141** " " " " " " (CNAA)
- 71 142** Cranfield, *Applicable mathematics* MSc
- 71 143** Cranfield, *Operational research* MSc
- 71 144** Dundee, *Functional analysis and differential equations* MSc
- 71 145** Dundee, *Numerical analysis and programming* MSc
- 71 146** Durham, *Mathematics* MSc
- 71 147** East Anglia, *Mathematical logic* BPhil/MA
- 71 148** East Anglia, *Theoretical mechanics* MSc See page 315
- 71 149** Edinburgh, *Statistics* MSc/Diploma
- 71 150** Essex, *Applied mathematics* MSc/Diploma
- 71 151** Essex, *Numerical analysis* MSc/Diploma
- 71 152** Essex, *Statistics and operational research* MSc/Diploma
- 71 153** Exeter, *Applied mathematics* MSc
- 71 154** Exeter, *Mathematical statistics* MSc/Certificate
- 71 155** Exeter, *Operational research* MSc/Certificate
- 71 156** Exeter, *Pure mathematics* MSc
- 71 157** Glasgow, *Statistics* MSc/Diploma
- 71 158** Heriot Watt, *Mathematics applied to physical sciences* MSc
- 71 159** " " " " " "
- 71 160** Keele, *Education* MSc
- 71 161** Kent, *Statistics* MSc/Diploma
- 71 162** Lancaster, *Mathematics* MSc/Diploma
- 71 163** Lancaster, *Operational research* MSc/Diploma
- 71 164** Leeds, *Mathematical education and mathematics* MSc
- 71 165** Leeds, *Pure mathematics* MSc 1c yr ft coursework choice from 2 of following main areas algebra ring and module theory homological algebra gp theory commutative algebra and algebraic geom topics in ring theory analysis intro to Banach spaces and algebraic measure
- 71 166** Leeds, *Statistics* MSc 1c yr ft (except normally 2c yrs) topics from exp'd design and analysis stochastic processes stat inference sample surveys time series analysis multivariate analysis and serial stats statistical ecology stats medical stats application of computers to stat calculation plus dissertation Contact Dr HW Peers
- 71 167** Liverpool, *Advanced numerical analysis* MSc

- 71:168 Liverpool, *Numerical methods and electronic computation*, MSc
- 71:169 Liverpool, *Operational mathematics*, MSc
- 71:170 Liverpool, *Pure mathematics*, MSc
- 71:171 London (Birkbeck), *Mathematical techniques of statistics and OR*, MSc
- 71:172 London (Birkbeck), *Statistics*, MSc
- 71:173 London (Imperial), *Pure mathematics*, MSc/DIC; students accepted for University of London Intercollegiate 1 yr MSc course in mathematics: student req to pass written exam in number of lecture courses and write small dissertation during summer mths; choice of courses from wide variety offered by Colleges of University which participate in MSc; topics for dissertation should be of mutual interest to student and supervisor: research interests of members of Pure Section are algebra (gp theory, representation theory, algebraic K-theory), combinatorics, number theory (algebraic, analytic, combinatorial and probabilistic), analysis (real and complex), functional analysis and global analysis. Contact Professor KF Roth
- 71:174 London (Imperial), *Statistics*, MSc/DIC, 1c yr f-t; strong math background req; suitable preparation for stat work in many fields and for operational work placing emphasis on stat and math techniques; *lecture courses*: theory of probability, stat methods, theory of stats, time series, stochastic processes, multivariate analysis, design of expts, freq data, sampling techniques, optimisation, computational stats, current research in stats; coursework assessment, dissertation on applied or theoretical project (SERC). Contact Head of Department
- 71:175 London (Inst Ed), *Mathematical, statistical and computing education*, MSc
- 71:176 London (KQC), *Mathematics education*, MA/MEd
- 71:177 London (KQC), *Pure and applied mathematics*, MSc See page 316
- 71:178 London (KQC), *Science or mathematics education*, MA
- 71:179 London (LSE), *Mathematics*, MSc
- 71:180 London (LSE), *Operational research*, MSc
- 71:181 London (LSE), *Sociology and statistics*, MSc
- 71:182 London (LSE), *Statistics*, MSc
- 71:183 London (Queen Mary), *Mathematics*, MSc
- 71:184 London (RHBC), *Mathematics*, MSc
- 71:185 London (UC), *Statistics*, MSc
- 71:186 Loughborough, *Mathematical education*, MSc
- 71:187 Loughborough, *Mathematics of modern control systems*, MSc See page 316
- 71:188 Loughborough, *Optimisation and computing*, MSc See page 316
- 71:189 Loughborough, *Statistics and operational research*, MSc
- 71:190 Manchester, *Applied mathematics and mechanics of fluids*, MSc
- 71:191 Manchester, *Mathematical logic and the theory of computation*, MSc/Diploma
- 71:192 Manchester, *Numerical analysis and computing*, MSc/Diploma
- 71:193 Manchester, *Pure mathematics*, MSc/Diploma
- 71:194 Manchester, *Statistics*, MSc/Diploma
- 71:195 Manchester (UMIST), *Pure mathematics*, MSc/Diploma
- 71:196 Manchester (UMIST), *Statistics*, MSc/DipTechSci
- 71:197 Newcastle, *Engineering mathematics*, MSc
- 71:198 Newcastle, *Mathematical techniques and their application*, MSc
- 71:199 Newcastle, *Statistics*, MSc
- 71:200 Nottingham, *Mathematics*, MSc/Diploma
- 71:201 Open, *Mathematics*, MSc
- 71:202 Oxford, *Applied statistics*, MSc/Diploma
- 71:203 Oxford, *Mathematical modelling and numerical analysis*, MSc, 1 yr f-t; coursework; integrated course in math modelling and numerical soln of practical problems in science and eng, esp involving differential eqns; lectures and practical classes; exam and dissertation. Contact Professor KW Morton, Dr AB Taylor
- 71:204 Reading, *Applied mathematics*, MSc
- 71:205 Reading, *Biometry*, MSc
- 71:206 Reading, *Mathematical education*, MSc
- 71:207 Reading, *Numerical solution of differential equations*, MSc/Diploma
- 71:208 St Andrews, *Statistics*, MSc
- 71:209 Salford, *Modern applicable mathematics*, MSc

- 71 210 Salford *Statistics* MSc  
 71 211 Sheffield, *Probability and statistics* MSc  
 71 212 Sheffield, *Pure mathematics* MSc  
 71 213 Sheffield City Poly, *Applied statistics* MSc/Diploma (CNAAB)  
 71 214 Southampton *Applied mathematics and theoretical physics* MSc  
 71 215 Southampton, *Applied statistics* MSc  
 71 216 Southampton *Mathematics education* MSc  
 71 217 Southampton, *Operational research* MSc  
 71 218 South Bank Poly, *Mathematical education* MSc (CNAAB)  
 71 219 Strathclyde *Operational research* MSc/Diploma 1c yr f t 3c yrs p-t (hons deg inc some maths at univ standard for MSc req) curriculum OR techniques (linear programming integer and nonlinear programming dynamic programming forecasting project network analysis inventory control queueing theory maintenance and reliability theory simulation optimisation techniques decision theory) heuristics communications OR methodology stats computing ancillary subjs (cost accountancy economics industrial relations organisation and management) problem discussion sessions case studies work visits dissertation Contact CDJ Waters  
 71 220 Sunderland Poly, *Mathematical modelling and computer simulation* MSc (CNAAB)  
 71 221 Sussex *Analysis and partial differential equations* MSc  
 71 222 Sussex, *Mathematics* MSc See page 315  
 71 223

Contact Prospectus and application form from Postgraduate Course Secretary Operational research

- 71 224  
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 71 234 Warwick *Statistics* MSc/Diploma  
 71 235 York, *Mathematics and mathematical education* MSc

### Certificates and diplomas

- 71 236 Aberdeen, *Mathematical sciences* Diploma  
 71 237 Cambridge, *Mathematical statistics* Diploma See page 315  
 71 238 Cambridge, *Mathematics* Certificate  
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 71 244 Dundee, *Mathematics* Diploma  
 71 245 Dundee, *Statistics and computer science* Diploma  
 71 246 East Anglia *Pure mathematics* Diploma  
 71 247 East Anglia *Theoretical mechanics* Diploma

- 71:248 Essex, *Mathematics*, Certificate  
71:249 Essex IHE, *Management of mathematics*, Diploma (Math Assoc)  
71:250 Essex IHE, *Mathematical education*, Diploma (Math Assoc)  
71:251 Essex IHE, *Teaching of mathematics to low-attaining pupils*, Diploma (Math Assoc)  
71:252 Glasgow, *Mathematics*, Diploma  
71:253 Heriot-Watt, *Mathematics*, Certificate  
71:254 Hertfordshire CHE (Watford), *Mathematical education*, Diploma (Math Assoc)  
71:255 Hertfordshire CHE (Watford), *Teaching of mathematics to low attainers*, Diploma (Math Assoc)  
71:256 Hull, *Operational research*, Diploma  
71:257 La Sainte Union CHE (Southampton), *Mathematical education*, Diploma (Math Assoc)  
71:258 Leeds, *Teaching of mathematics*, Diploma  
71:259 Liverpool, *Mathematical studies*, Diploma  
71:260 Liverpool IHE, *Mathematical education*, Diploma  
71:261 London (Goldsmiths'), *Teaching of pre-school and primary mathematics*, Diploma  
71:262 London (KQC), *Mathematics*, Diploma  
71:263 London (KQC), *Science or mathematics education for overseas students*, Diploma  
71:264 London (LSE), *Operational research*, Diploma  
71:265 London (LSE), *Statistics*, Diploma  
71:266 London (UC), *Statistics*, Diploma  
71:267 New C (Durham), *Mathematical education*, Diploma (Math Assoc)  
71:268 New C (Durham), *Teaching mathematics to low attainers in secondary schools*, Diploma (Math Assoc)  
71:269 N Cheshire C, *Mathematical education*, Diploma (Math Assoc)  
71:270 NE London Poly, *Biometry*, Diploma (CNAA)  
71:271 NE London Poly, *Models in statistics and operational research*, Diploma (CNAA)  
71:272 NE Wales IHE, *Primary mathematics education*, Diploma  
71:273 Nottingham, *Mathematics*, Diploma  
71:274 Poly of North London, *Mathematics in the primary school*, Diploma (Math Assoc)  
71:275 Poly of North London, *Operational research*, Diploma (CNAA)  
71:276 St Andrews, *Mathematics*, Diploma  
71:277 St Andrews, *Statistics*, Diploma  
71:278 St Mark & St John C (Plymouth), *Teaching of mathematics to low-attaining pupils*, Diploma (Math Assoc)  
71:279 St Mary's C (Strawberry Hill), *Mathematical education*, Diploma (Math Assoc)  
71:280 Sheffield City Poly, *Teaching of mathematics to low-attaining pupils*, Diploma  
71:281 Southampton, *Operational research*, Certificate  
71:282 Southampton, *Statistics*, Certificate  
71:283 Southampton IHE, *Operational research and computer techniques*, Diploma/Associateship of Inst, 1 yr f-t (deg or approved professional qual req); designed for grads with some industrial or commercial experience, but with no formal training in OR/computing; practical bias: students expected to carry out project work and industrial case studies using computer (VAX 11/780) (course supported by LEAs, OR Society and industrial training boards). Contact D Tromans, Course Supervisor  
71:284 Strathclyde, *Mathematical studies*, Diploma  
71:285 Strathclyde, *Statistics*, Diploma  
71:286 Sunderland Poly, *Mathematical education*, Diploma (Math Assoc)  
71:287 Thames Poly, *Management of mathematics departments*, Diploma  
71:288 Ulster, *Mathematical studies*, Diploma/Certificate  
71:289 Ulster, *Statistics*, Diploma/Certificate  
71:290 West London IHE, *Mathematical education*, Diploma (Math Assoc)  
71:291 West Midlands CHE (Walsall), *Mathematical education*, Diploma (Math Assoc)

# University of Sussex

## MATHEMATICS

### MSc

Taught courses are chosen from a list taken from the whole area of pure and applied mathematics including statistics. The subject matter reflects the research interests of the Mathematics faculty. Students also have to produce a dissertation. The course provides the necessary background for students intending to do a research degree. A special MSc is also offered in Analysis and Partial Differential Equations.

### MPhil/DPhil

Supervision is available in most areas of pure and applied mathematics and statistics. Areas in which there is a strong research interest include functional analysis and its applications to the modern theory of differential equations, low-dimensional topology and its interaction with group theory, finite geometries, category theory, probability theory, applied statistics, numerical analysis.

Further Information

The Chairman

Mathematics Division

University of Sussex, Brighton BN1 9QH

# University College of Wales Aberystwyth



## MATHEMATICS

**PhD/MSc by Research.** Supervision is available in the following areas:  
**Applied Mathematics:** rheology, rheological flow problems together with experimental programme, differential equations, wave propagation in inhomogeneous media, control theory, numerical analysis, proposed problems, integral equations.

**Pure Mathematics:** algebra, group representation theory, design theory, permutation groups, ring theory, analysis, non-linear differential equations, functional analysis.

**Statistics:** Bayesian inference and decision theory, time series, educational testing, quality control and life testing, designing experiments and surveys, multivariate statistics, probability and stochastic processes, data processing and regularisation.

**MSc by Coursework and Dissertation:** Postgraduate Diploma (coursework only). One or two year programmes depending on background. Courses to be selected from the following:

**Applied Mathematics:** Numerical analysis, wave propagation and ordinary differential equations, control theory and biological modelling, viscous flow and rheology.

**Pure Mathematics:** Topics in algebra, group representation theory, Lie algebras, design theory and finite geometry, nonlinear differential equations, dynamical systems, functional analysis.

**Statistics:** Bayesian inference and decision theory, linear models, sampling, applied statistics, probability and stochastic processes, simulation, reliability, queueing, time series, operational research, classical inference.

Enquiries to: Dr R.J. Owen, Postgraduate Admissions Tutor, Department of Mathematics, University College of Wales, Aberystwyth, Dyfed SY23 3BZ.

# Mathematics at UEA Norwich

# UEA NORWICH

The University of East Anglia has a School of Studies in the Arts & Music, Biological Sciences, Chemical Sciences, Economics & Social Sciences, Education, Development Studies, Economic & Social Sciences, Education, English & American Studies, Environmental Sciences, Information Sciences, Law, Mathematics & Physics, and Modern Languages & European History, all of which offer opportunities for postgraduate study. UEA's School of Mathematics and Physics offers the following:

**MSc in Theoretical Mechanics.** This course reflects the risk-taking and advances made in the mechanics of continuous media over the last 40 years. It consists of seven lecture courses assessed by examination on a wide variety of topics in both fluid and solid mechanics followed by a dissertation.

**MSc in the Mathematics of Information Systems.** This course draws together the many strands of modern pure mathematics and statistics that are relevant to Information Systems. The taught part of the course consists of many short lecture modules each lasting two or three weeks. A further part of the course involves independent research on a topic of the student's choice. The course is designed to be studied in modules by a student who is not full-time.

**PhD/MPhil by research.** Supervision is available in many areas of fluid mechanics and solid mechanics and in general theory, number theory, finite geometries and time series.

Further detail and application form may be obtained from Dr D.J. Needham (CRAC, School of Mathematics, Physics, University of East Anglia, Norwich NR4 7T).

# University of Cambridge

## STATISTICAL LABORATORY

### Diploma in Mathematical Statistics

Applications are invited for this nine-month postgraduate course which includes statistical theory and practice together with some applied probability, operations research and relevant computational experience. Besides lectures and practical classes, students receive individual supervision throughout the course. They also work on an applied project for which they submit a short dissertation in May. The choice of available projects generally include such topics as telecommunications, operational research, medical statistics, agriculture, psychology, economics. These projects are selected from other departments within the University or from local industry or research institutes.

Candidates should normally have or expect to attain at least an upper second class honours degree in which mathematics is a major part. For further details, contact the Director of Studies, Statistical Laboratory, 16 Mill Lane, Cambridge CB2 1SB (telephone 0223 337954) preferably by 1 February 1987.



## Exeter University

### Mathematical Sciences

**PhD/MPhil:** Supervision available in the following areas: pure maths: commutative algebra, ring theory, modules & theory, number theory, arithmetic and algebraic geometry, abelian group theory, nonassociative algebras; functional analysis: combinatorics, geometry and computer graphics.

**applied maths:** geophysical fluid dynamics including dynamical oceanography and meteorology, stability theory, viscous flows, boundary layer theory, computational fluid mechanics, geomechanics, numerical analysis, variational methods.

**MSc:** a one-year programme of full-time study combining course work assessed by examination and project work assessed by dissertation. Courses to be selected from those available which include:

**applied maths:** dynamical oceanography, geomechanics, atmospheric dynamics, stability theory, numerical analysis, spectral analysis, variational methods.  
**pure maths:** Selection from: algebraic geometry, combinatorics, commutative algebra, number theory, abelian group theory, rings and modules, classical analysis, rings of continuous functions.

**Diploma in Science Studies:** The diploma offers overseas students the opportunity to prepare to take a higher degree or research qualification in mathematics whilst at the same time improving their knowledge of the English language.

**Enquiries to:** The Postgraduate Admissions Tutor, Department of Mathematics, The University, Exeter EX4 4QJ.

## University of Exeter

### Department of Mathematical Statistics and Operational Research

The department undertakes supervised research leading to the degrees of MPhil or PhD in the following areas:

**Probability and Theoretical Statistics:** Mathematical theory of epidemics, models for growth, filtered binary processes in continuous time, non-linear processes in discrete time, image processing, likelihood inference, transformations, sample splitting and allied techniques, generalised linear models, compound distribution models.

**Applied Statistics:** Statistical epidemiology, perinatal statistics, bioassay, clinical decision making, longitudinal studies, animal population dynamics, medical time series, geographical data, correspondence analysis, graphical methods, statistical software.

**Operational Research:** visual interactive simulation, decision support systems, intelligent knowledge-based systems, network problems and computer solutions, model building in commerce and industry, OR in developing countries, stock control, physical distribution, ambulance service management, diet formulation problems in agriculture.

The Department also offers an MSc programme by coursework and dissertation.

For further information please contact:  
The Postgraduate Admissions Tutor, MSOR Dept  
Streatham Court, University of Exeter, Exeter EX4 4PU.

## MATHS at KING'S

King's College (KQC) (University of London) has a very large department of Pure and Applied Mathematics, which is housed on the Strand site in central London.

**PhD/MPhil:** the largest research areas are in Quantum Mechanics, Relativity and a wide spread of topics centering on Analysis. Supervision can be offered in these areas and in several other areas of Pure and Applied Mathematics.

**MSc:** the London Intercollegiate MSc can be taken at King's by full-time or part-time study.

**Diplomas** include the Diploma in Classical and Quantum Gravity.

**Details:** Postgraduate Admissions Officer, Mathematics Department, King's College, London WC2R 2LS.



## LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

The following MSc courses are available in the Mathematics Department.

### Mathematics of Modern Control Systems

The aim of this course is to provide the necessary mathematical techniques for studying control systems, and give a training suitable for both the industrial application of these techniques, and continuing research into their theoretical aspects. The course is sufficiently broad for successful students to consider careers in various fields. This course is accepted by SLRC for the award of its Advanced Course Studentships.

### Optimisation and Computing

This course has two aims: firstly to present modern methods of optimisation in such a way as to encourage both the theoretician and the practitioner, and secondly to provide an introduction to numerical analysis and computing with the emphasis on those topics of relevance to a user of optimisation techniques.

For either course a good honours degree with a high mathematical content is required. Further details and application forms from Dr A C Pugh, Department of Mathematics.

Loughborough

Leicestershire

## 72 Physical sciences: acoustics, sound and vibrations

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

72.1 *Cardiff, Sound and vibration studies, MPhil/PhD*

72.2 *Cardiff, Sound and vibration studies, MPhil/PhD*

72.3 *Cardiff, Sound and vibration studies, MPhil/PhD*

72.4 *Southampton, Sound and vibration studies, MPhil/PhD*

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

72.5 *Heriot Watt, Acoustics, vibration and noise control, MSc/Diploma*

72.6 *Salford, Acoustics, MSc*

72.7 *Southampton, Sound and vibration studies, MSc/Diploma*

72.8 *South Bank Poly, Environmental acoustics, MSc/Diploma (CNA)*

# 73 Physical sciences: astronomy and space physics

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 73:1** **Aberdeen**, *Natural philosophy*, MSc/PhD
- 73:2** **Aston**, *Mathematics and physics*, MPhil/PhD
- 73:3** **Belfast**, *Pure and applied physics*, MSc/PhD
- 73:4** **Birmingham**, *Space research*, MSc/PhD
- 73:5** **Cambridge**, *Astronomy*, MSc/PhD
- 73:6** **Durham**, *Physics*, MSc/PhD
- 73:7** **Edinburgh**, *Astronomy and astrophysics*, MPhil/PhD
- 73:8** **Glasgow**, *Astronomy*, MSc/PhD; supervision available; areas of research inc: *theoretical astrophysics*: plasma physics of solar flares, comets, accreting binaries, active galaxies; interpretation of solar x-ray, gamma-ray and microwave emission; image processing and inverse problems; theory of circum-stellar envelopes; *celestial mechanics*: stability of N-body systems esp solar system; numerical integration schemes; dynamical resonances; *cosmology*: sp soln of Einstein's eqns in cosmology and compact objects; *optical observation and instrumentation*: instrument design and prelim testing at Univ Observatory; observing programmes on SERC telescopes abroad; solar and stellar spectropolarimetry; atm studies; computer simulations and stat studies of data. Contact Professor Archie E Roy
- 73:9** **Hatfield Poly**, *Astronomy and earth sciences*, MPhil/PhD (CNAAC)
- 73:10** **Keele**, *Physics*, MSc/PhD
- 73:11** **Lancashire Poly**, *Physics and astronomy*, MPhil/PhD (CNAAC)
- 73:12** **Lancaster**, *Lunar and planetary studies*, MPhil/PhD
- 73:13** **Leicester**, *Astronomy*, MPhil/PhD
- 73:14** **London (Imperial)**, *Astronomy and space physics*, MPhil/PhD
- 73:15** **London (Imperial)**, *Remote sensing*, MPhil/PhD
- 73:16** **London (Queen Mary)**, *Mathematics*, MPhil/PhD
- 73:17** **London (Queen Mary)**, *Physics*, MPhil/PhD
- 73:18** **London (UC)**, *Astronomy*, MPhil/PhD
- 73:19** **Manchester**, *Astronomy*, MSc/PhD
- 73:20** **Manchester**, *Radio astronomy*, MSc/PhD
- 3:21** **Manchester (UMIST)**, *Physics*, MSc/PhD
- 3:22** **Newcastle**, *Geophysics and planetary physics*, MSc/PhD
- 3:23** **Oxford**, *Astrophysics*, MSc/DPhil
- 73:24** **St Andrews**, *Astronomy and astrophysics*, MSc/PhD
- 73:25** **Southampton**, *Physics*, MPhil/PhD
- 73:26** **Sussex**, *Astronomy*, MPhil/DPhil
- 73:27** **Wales (Cardiff)**, *Applied mathematics and astronomy*, MSc/PhD
- 73:28** **Wales (Cardiff)**, *Astrophysics*, MSc/PhD



## 74 Physical sciences: chemistry

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 74:1 Aberdeen, Chemistry, MSc/PhD**
- 74:2 Aston, Chemistry, MPhil/PhD;** projects offered in research groups: metalloorganic; aluminosilicates, humic acids, new materials based on selenium, tellurium and bismuth; neurochem; brain metabolism, tetrahydrobiopterin tetrahydrofolate biochem; polymers; processing and performance, speciality polymers, spectroscopic techniques. Contact Dr GB Briscoe
- 74:3 Bath, Chemistry, MSc/PhD;** supervision available, research interests inc: surface chem, catalysis, spectroscopy at surfaces, solid state chem, theoretical prediction of solid structures, non-electrolyte and polymer solns, reactions in aqueous and non-aqueous systems, thermochem, organometallic and co-ordination chem of transition metals, polymer supported transition metal catalysts, group IV chemistry, Mossbauer spectroscopy, bio-inorg chem, geochem, radiochem, analytical chem, antibiotic chem, org chem and biochem of biol-important natural products, new synthetic methods in org chem, mass spectrometry, high field NMR spectroscopy, organophosphorus chem, organosulphur chem, org electrochem, photochem, chem of indoles and carbazoles, small peptide chem, new chem of carbohydrates, molecular modelling, molecular graphics. Contact Mrs E Bird
- 74:4 Belfast, Chemistry, MSc/PhD**
- 74:5 Birmingham, Chemistry, MSc/PhD**
- 74:6 Birmingham Poly, Chemistry, MPhil/PhD (CNA)**
- 74:7 Bradford, Chemistry, MPhil/PhD**
- 74:8 Brighton Poly, Applied chemistry, MPhil/PhD (CNA)**
- 74:9 Bristol, Chemistry, MSc/PhD**
- 74:10 Bristol Poly, Chemistry, MPhil/PhD (CNA)**
- 74:11 Brunel, Chemistry, MPhil/PhD;** research interests in following areas, some specific projects named: *surface chem and thermal studies:* physical adsorption of gases and applications for characterisation of porous solids; *heterogenous catalysis:* structure, adsorptive and catalytic properties of metal catalysts and their use in processes of industrial and environmental importance; *solid state chem:* structure and properties of zeolitic materials and clays, interaction of these with organics; *inorg chem:* elucidation and interpretation of properties of ions in crystals of salts and in aqueous and org solns; *synthetic org chem:* organometallics in synthesis, total synthesis of natural products, asymmetric syntheses reactions under flash vac pyrolysis conditions, heterocyclic chem; *physical org chem:* reaction kinetics of chlorine isotopic exchange of aromatic chloro cpds, proto-deacylation of aromatic ketones; hydrolysis of halogenomethanes, ring expansion and contraction reactions, conformational studies; *industrial inorg chem:* metal chelatants from natural products, anti oxidants, borate chelatants, fluor naphthylimides, modifications of coals; *biol and medicinal org chem:* theoretical study of nucleic acid complexes, syntheses of cpds of potential use as anti-spasmodics and anti-asthma drugs, in treatment of cancer, and as chem probes of biol systems; *physical chem and spectroscopy:* esr and mo calculations on org free radicals, potentiometric and absorptiometric determination of stability constants; *chromatography:* detectors for permanent gas analysis; concentration systems for trace pollutants; gas chromatography; *nuclear science:* solvent extraction and ion-exchange, inorg soln chem, new refining process for rarer metals, isotopic exchange reactions; *environmental science:* use of catalysts in prevention or control of environmental pollution, studies of detoxification and disposal of industrial inorg and org waste. Contact Professor GC Bond
- 74:12 Cambridge, Organic and inorganic chemistry, MSc/PhD**
- 74:13 Cambridge, Physical chemistry, MSc/PhD**
- 74:14 City, Chemistry, MPhil/PhD;** supervision available, research interests in following fields, some

## Physical sciences chemistry

[illegible]

74 37 Leeds Poly /  
74 38 Leicester /  
74 39 Leicester Poly,  
74 40 Liverpool  
74 41 Liverpool

# Physical sciences chemistry

- her ffs in contact w th adsorbents and porous material  
plexes non metal clusters and organometallic compounds  
ndustrial catalysts metalloenzymes and chemotherapeutic  
X ray crystallography mass spectrometry biophysical  
synthesis development of new synthetic materials  
products and man made molecules cancer chemotherapy  
chem transient kinetic techniques and  
nant DNA technology
- 74 47 London (KQC) Chem**  
w h s p e m p h a s i s o n  
nucleosides nucleot  
cha des and of gosaccharides p o s a c d n  
nane chem small and med um r n g a l c e l c h e n  
organophosphorus organosilicon organophosphorus  
of chem reactions in solution and gas phase  
spectroscopy mass spectrometry x ray crystallography  
magnetic circular dichroism and electron spin resonance  
transitions metal complexes n a c a n o m a l m e u  
hyponitrites and nitrotriazoles b o n o g h e m m  
metals theoretical and computational h m n o m p  
bosensors analysis of residues n r u and g e a b  
74 48 London (Queen Mary) Chem try MPh I PhD  
74 49 London (RHBC) Chem try MPh I PhD  
74 50 London (UC) Chem try MPh I PhD  
and med chem theoretical chem and comp  
facilities current research synthe and  
and organometallic compounds structural and  
nmr esr and mass spectrometry and by x  
thermodynamics of ffs and f m x t u  
cellular basis of allergic disease Contact P o e  
51 Loughborough, Chem try MPh I/PhD re e h a  
analytical chem research g p a c e a m o n e n e d w h a a u h  
x ray crystallography polymer science materials  
chemists biochemists microbiologists and pharmaceutical  
interests of industrial companies gov't dep's etc full de a b a n a b f m D p  
Beck  
Luton CHE, Chem cal education MPh I/PhD (CNAA)  
Luton CHE, Chemistry MPh I/PhD (CNAA)  
Manchester Chem try MSc PhD  
Manchester (UMIST) Chem try MSc/PhD  
Manchester Poly Instrumentation and analytical science MSc PhD  
d-Kent CH & FE Science MPh I/PhD (CNAA)  
pier C (Edinburgh) Science MPh I/PhD (CNAA)  
n available from Head of Dept Contact Information Office  
wcastle Chemistry MSc/PhD  
wcastle Poly Chemistry MPh I/PhD (CNAA)  
ondon Poly Chemistry MPh I/PhD (CNAA)  
ales IHE, Chemistry MPh I/PhD (CNAA)  
ffs Poly Chem try MPh I/PhD (CNAA/Salford)  
gham, Chem try MPh I/PhD  
rganometallic intermediates by no el r spectroscopic techniques reactions non  
solvents especially oxides of N and n i c a c d and hydrogen fluoride chem of l q alkali  
of t n organo-t n antimony and lead compounds biophysical spectroscopy of organometallic  
theoretical organometallic chemistry total synthesis of molecules of enzymatic and structural studies in  
trum of natural products organometallic chemistry of importance synthe c  
organic photochemical electrochemical organometallic chemistry mechanism  
nm studies of dynamic processes x ray crystallography  
and molecular beam chemistry and reaction dynamics



cooled molecules; magnetic properties of materials; heterogeneous catalysis, org semiconductors and org metals inc biol aspects; colloid and interfacial chem, nmr relaxation; laser spectroscopy of molecular ions; reaction dynamics of molecular ions; surface chem and surface science. Contact Professor JP Simons

**74:66 Open, Chemistry**, BPhil/MPhil/PhD

**74:67 Oxford, Chemistry**, MSc/DPhil

**74:68 Paisley CT, Chemistry**, MPhil/PhD (CNAAC)

**74:69 Poly of North London, Chemistry**, MPhil/PhD (CNAAC)

**74:70 Poly of Wales, Science**, MPhil/PhD (CNAAC)

**74:71 Portsmouth Poly, Chemistry**, MPhil/PhD (CNAAC)

**74:72 Reading, Chemistry**, MPhil/PhD; supervision available, research interests under main headings shown, many topics (eg photochem and catalysis) range over all branches, sp interest in fundamental aspects of industrial processes, active research into range of environmental problems; *inorg chem*: synthetic chem of cpds of main gp and transition elements, with emphasis upon structure determination; co-ordination cpds; solid state chem (inc synthesis, testing and characterisation of heterogeneous catalysts); analytical chem (inc metal ion separation); *org chem*: photochem. development of new synthetic methods, new catalysts of oxidation and polymerisation inc organometallic cpds, development of synthetic pathways towards various anti-cancer agents, kinetic studies in soln at high pressures and transmission of electronic effects; *physical chem*: kinetics of gas-phase reactions (methylene and silylene reactions, radical processes and laser induced decompositions), molecular spectroscopy (rotational, vibrational and electronic spectra, inc high overtone and molecular beam studies), electrochem and surface chem (conductance of aqueous electrolyte solns, study of emulsions and Langmuir-Blodgett films). Contact Professor GWA Fowles

**74:73 St Andrews, Chemistry**, MSc/PhD

**74:74 Salford, Chemistry and applied chemistry**, MSc/PhD See page 329

**74:75 Scottish C Textiles (Galashiels), Applied chemistry**, MPhil/PhD

**74:76 Sheffield, Chemistry**, MSc/PhD

**74:77 Sheffield City Poly, Chemistry**, MPhil/PhD (CNAAC)

**74:78 Southampton, Chemistry**, MPhil/PhD; supervision available, research interests inc: liq crystals, membranes, nmr spectroscopy of liq crystals, computer simulation of surfaces, molecular liqs, quantum chem; modulated specular reflectance spectroscopy, inter-facial electrochem using ex-situ uhv techniques, semiconductor photoelectrochem, fast ion conductors, methods for investigating kinetics of electrochem reactions, electrochem eng and industrial chem. spectroscopic structural studies of inorg cpds, matrix isolation of high temp spp, metal carbonyl clusters, homogeneous and heterogeneous catalysis, environmental analysis and speciation, *inorg chem* in molten salts, co-ordination and organometallic chem, *inorg biochem* and nuclear medicine, design and synthesis of new materials, x-ray and neutron diffraction; natural product synthesis, bio-org chem, molecular modelling for study of biomolecular shape and conformation, synthetic methods and org reactions, org electrochem, novel oxidation methods, theoretical org chem; h-p and high temp chem, gas phase studies of structure and reactions of molecules using molecular beam laser spectroscopy, mass spectrometry and glc photoelectron spectroscopy of unstable molecules, chem of gas-solid interface, ellipsometry in study of interfacial properties. Contact Dr DE Rogers

**4:79 Stirling, Chemistry**, MSc/PhD

**4:80 Strathclyde, Pure and applied chemistry**, MSc/PhD; supervision available in following areas, some specific projects named: *physical chem*: crystal chem, molecular electronics and opto-electronics; application of X-ray and electron techniques to study of solids and surfaces, electrical properties of polymers, theoretical chem, laser photochem; *org chem*: organotransition-metal cpds, study of enzyme action and inhibition, synthetic methods, synthesis of potential drugs, natural products, org matrix isolation, free radicals; *inorg chem*: preparative and spectrometric studies of complexes, bio-inorg chem esp of copper and gold, main gp chem esp boron and lithium, development of novel analytical instrumentation and procedures, theoretical aspects of inorg chem; *chem technology*: electrochem inc reactor designs, corrosion and surface studies, kinetic investigations of new photo-initiated polymerisations, use of polymer gels as industrial extractants, basic chem processes of org flotation and ore solvent extraction, preparation of semi-conductor materials by chem vapour deposition; *fibres and textiles*: fibre physics, fibre chem, rheology and evaluation of textile fabrics; relations between molecular structure of high polymers and properties of fibres produced from polymers; *forensic science*: new methods of forensic investigation, case studies, biol, spectroscopy and chromatographic method development, specimen identification, correlation of evidence.

81 **Sunderland Poly**, *Physical sciences*, MPhil/PhD (CNAAB)

82 **Surrey**, *Chemistry*, MPhil/PhD

83 **Sussex**, *Chemistry and molecular sciences*, MPhil/PhD research interests in following fields: high resolution

molecular spectroscopy, molecular dynamics, transition metal chem synthesis, spectroscopy and electrochem of novel transition metal cpds, structural and surface chem physical adsorption of gases and vapours Contact Professor AJ McCaffery

84 **Teesside Poly**, *Chemistry*, MPhil/PhD (CNAAB)

85 **Thames Poly**, *Chemistry*, MPhil/PhD (CNAAB)

86 **Trent Poly**, *Physical sciences*, MPhil/PhD (CNAAB)

87 **Ulster**, *Chemistry*, MPhil/DPhil

88 **Wales (Aberystwyth)**, *Chemistry*, MSc/PhD research interests in following fields: high resolution molecular spectroscopy, Raman and fluorescence spectroscopy

research interests in following fields: molecular structure theory, photochromism, synthesis of conductors and electro active materials of their applications as catalysts

89 **Wales (Bangor)**, *Chemistry*, MSc/PhD

90 **Wales (Cardiff)**, *Chemistry*, MSc/PhD

91 **Wales (Swansea)**, *Chemistry*, MSc/PhD

92 **Wales (Swansea)**, *Chemistry*, MSc/PhD

93 **Wales (Swansea)**, *Chemistry*, MSc/PhD

research interests in following fields: molecular structure theory, photochromism, synthesis of conductors and electro active materials of their applications as catalysts

94 **Warwick**, *Chemistry*, MSc/PhD research interests in following fields: high resolution

physical chem

synthetic, st

co-ordinative

props of ne

reactants

95 **Wolverhampton Poly**, *Chemistry*, MPhil/PhD

96 **Wolverhampton Poly**, *Chemistry*, MPhil/PhD

cooled molecules; magnetic properties of materials; heterogeneous catalysis, org semiconductors and org metals inc biol aspects; colloid and interfacial chem, nmr relaxation; laser spectroscopy of molecular ions; reaction dynamics of molecular ions; surface chem and surface science. Contact Professor JP Simons

**74:66 Open, Chemistry, BPhil/MPhil/PhD**

**74:67 Oxford, Chemistry, MSc/DPhil**

**74:68 Paisley CT, Chemistry, MPhil/PhD (CNA)**

**74:69 Poly of North London, Chemistry, MPhil/PhD (CNA)**

**74:70 Poly of Wales, Science, MPhil/PhD (CNA)**

**74:71 Portsmouth Poly, Chemistry, MPhil/PhD (CNA)**

**74:72 Reading, Chemistry, MPhil/PhD;** supervision available, research interests under main headings shown, many topics (eg photochem and catalysis) range over all branches, sp interest in fundamental aspects of industrial processes, active research into range of environmental problems; *inorg chem*: synthetic chem of cpds of main gp and transition elements, with emphasis upon structure determination; co-ordination cpds; solid state chem (inc synthesis, testing and characterisation of heterogeneous catalysts); analytical chem (inc metal ion separation); *org chem*: photochem, development of new synthetic methods, new catalysts of oxidation and polymerisation inc organometallic cpds, development of synthetic pathways towards various anti-cancer agents, kinetic studies in soln at high pressures and transmission of electronic effects; *physical chem*: kinetics of gas-phase reactions (methylene and silylene reactions, radical processes and laser induced decompositions), molecular spectroscopy (rotational, vibrational and electronic spectra inc high overtone and molecular beam studies), electrochem and surface chem (conductance of aqueous electrolyte solns, study of emulsions and Langmuir-Blodgett films). Contact Professor GWA Fowles

**74:73 St Andrews, Chemistry, MSc/PhD**

**74:74 Salford, Chemistry and applied chemistry, MSc/PhD** See page 329

**74:75 Scottish C Textiles (Galashiels), Applied chemistry, MPhil/PhD**

**74:76 Sheffield, Chemistry, MSc/PhD**

**74:77 Sheffield City Poly, Chemistry, MPhil/PhD (CNA)**

**74:78 Southampton, Chemistry, MPhil/PhD;** supervision available, research interests inc: liq crystals, membranes, nmr spectroscopy of liq crystals, computer simulation of surfaces, molecular liqs, quantum chem; modulated specular reflectance spectroscopy, inter-facial electrochem using ex-situ uhv techniques, semiconductor photoelectrochem, fast ion conductors, methods for investigating kinetics of electrochem reactions, electrochem eng and industrial chem; spectroscopic structural studies of inorg cpds, matrix isolation of high temp spp, metal carbonyl clusters, homogeneous and heterogeneous catalysis, environmental analysis and speciation, inorg chem in molten salts, co-ordination and organometallic chem, inorg biochem and nuclear medicine, design and synthesis of new materials, x-ray and neutron diffraction; natural product synthesis, bio-org chem, molecular modelling for study of biomolecular shape and conformation, synthetic methods and org reactions, org electrochem, novel oxidation methods, theoretical org chem; h-p and high temp chem, gas phase studies of structure and reactions of molecules using molecular beam laser spectroscopy, mass spectrometry and glc photoelectron spectroscopy of unstable molecules, chem of gas-solid interface, ellipsometry in study of interfacial properties. Contact Dr DE Rogers

**74:79 Stirling, Chemistry, MSc/PhD**

**74:80 Strathclyde, Pure and applied chemistry, MSc/PhD;** supervision available in following areas, some specific projects named: *physical chem*: crystal chem, molecular electronics and opto-electronics, application of X-ray and electron techniques to study of solids and surfaces, electrical properties of polymers, theoretical chem, laser photochem; *org chem*: organotransition-metal cpds, study of enzyme action and inhibition, synthetic methods, synthesis of potential drugs, natural products, org matrix isolation, free radicals; *inorg chem*: preparative and spectrometric studies of complexes, bio-inorg chem esp of copper and gold, main gp chem esp boron and lithium, development of novel analytical instrumentation and procedures, theoretical aspects of inorg chem; *chem technology*: electrochem inc reactor designs, corrosion and surface studies, kinetic investigations of new photo-initiated polymerisations, use of polymer gels as industrial extractants, basic chem processes of ore flotation and ore solvent extraction, preparation of semi-conductor materials by chem vapour deposition; *fibres and textiles*: fibre physics, fibre chem, rheology and evaluation of textile fabrics; relations betwn molecular structure of high polymers and properties of fibres produced from polymers; *forensic science*: new methods of forensic investigation, case studies, biol, spectroscopic and chromatographic method development, specimen identification, correlation of evidence.

- 74 81 **Sunderland Poly.** Physical sciences, MPhil/PhD (CNAAC)  
 74 82 **Surrey, Chemistry**, MPhil/PhD  
 74 83 **Sussex, Chemistry and molecular sciences** MPhil/PhD research interests in following

some specific projects named *biolchem and molecular enzymology* target enzymes for drug sensors fungal metabolites physical techniques in enzymology *chem physics and spectro* astrophysical chem high resolution spectroscopy of transient molecules and novel species spectroscopy collision and reaction dynamics using laser methods energy transfer molecule studies of clusters and dynamical processes *environmental science* soil erosion molschistosomiasis ecology of snails *main gp element chem* discovering new types of cpds of ma elements *organometallic chem* main gp elements transition metals f block metals physical chem investigation of fundamentals of molecular change theoretical chem valence the intermolecular forces molecular dynamics transition metal chem synthesis spectroscopy electrochem of novel transition metal cpds structural and surface chem physical adsorption gses and vapours Contact Professor AJ McCaffery

- 74 84 **Teesside Poly.** Chemistry MPhil/PhD (CNAAC)  
 74 85 **Thames Poly.** Chemistry MPhil/PhD (CNAAC)  
 74 86 **Trent Poly.** Chemistry MPhil/PhD (CNAAC)  
 74 87 **Ulster, Chemistry** MPhil/PhD (CNAAC)  
 74 88 **Wales (Aberystwyth), Chemistry** MSc/PhD research interests in following fields high resolution

molecular spectroscopy Raman and other aspects of 2 phot in spectroscopy molecular interaction and dynamics in condensed phases dielectric Kerr effect studies for r and theoretic studies on polymers liqs and liq crystals gas phase kinetics and gas solid interactions studies of electronic structure theory electrochem electron spectroscopy in inorg and surface chem photochromism synthesis of cpds of medicinal and biol interest org molecular complexes org conductors and electro active materials organometallic chem study of properties of silicates and of their applications as catalysts in org reactions Contact Dr Alf Price

- 74 89 **Wales (Bangor), Chemistry** MSc/PhD  
 74 90 **Wales (Cardiff), Chemistry** MSc/PhD  
 74 91 **Wales (Swansea), Chemistry** MSc/PhD  
 74 92 **Wales (Swansea), Chemistry** MSc/PhD  
 74 93 **Wales (UWIST), Applied chemistry** MSc/PhD supervision available

ing fields some specific projects named *analytical chem* ion selective electrodes inc enzyme based sensors and their application medical diagnostic screening methods and surfactant analysis separations and extractions of analytical and environmental interest wine chem applications of polarography *bio inorg chem* computer simulation of biol systems and radwaste disposal trace element pharmacology low molecular weight Fe Cu and Zn complexes in *in vivo org medicinal chem heterocyclic cpds* synthesis of new O N and S heterocycles of potential value as drugs and of biof active natural products hydrazones and conjugated heterenoid cpds synthesis of potential anti-cancer agents and pesticides for correlation analysis chromones benzimidazoles photochromic cpds *polymer science and technology* kinetics and mechanisms of polymerisation processes, polymer autoxidation and degradation kinetics and mechanisms of polymerisation structure diffusion and gel formation in polymer systems chem of poly (vinyl chloride) and its formation Contact Professor David R Williams

- 74 94 **Warwick, Chemistry**, MSc/PhD supervision available for research in gen areas of inorg org physical chem and also biochem research interests are concerned with following topics inorg synthetic, structural and mechanistic aspects of both main gp and transition elements with sp ref to co-ordination and organometallic chem and bio-inorg mechanisms org and bio-org synthesis and props of new heterocyclic and organometallic cpds models of enzymatic reactions enzymatic reactions in org synthesis synthesis of enzyme inhibitors and biof intermediates magnetic resonance techniques applied to chem and biochem problems investigation of synthesis and analyt oligo- and polynucleotides chem/biochem studies of olfaction physical fundamental and chem cal aspects of mass spectrometry and gas phase ion chem potential energy surfaces and chem dynamics of ion-molecule reactions photochem and ess of radicals in soln electrochem kinetics ion selective electrodes and synthetic sensors structural and analytical applications of h oh c d nmr spectrometry, lattice energy calculations and the solid state C<sup>13</sup> NMR

**Wolverhampton Poly.** Chemistry MPhil/PhD leads to thesis on chochem and biochem in

equipped with mod specialist facilities; project, which is always carried out under direct supervision of member of academic staff, designed to provide first class training in research; in addition, imaginative programme of course-work provides research students with opportunity to broaden their interests and to gain experience of writing and speaking about technical matters: the department is an integral part of attractive university campus set round a lake and situated on edge of mediaeval city of York. Contact Dr CJ Garrat

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 74:97** Aberdeen, *Analytical chemistry*, MSc/Diploma  
**74:98** Aberdeen, *Silicate and solid state chemistry*, MSc  
**74:99** Belfast, *Analytical chemistry*, MSc/Diploma  
**74:100** Bristol, *Advanced analytical chemistry*, MSc, 1c yr f-t; *course content*: analytical spectroscopy (x-ray diffraction and fluor, i-r inc absorption and emission modes of spectroscopy), techniques of separation (eg solvent extraction, chromatography), electroanalytical chem (electrode processes, polarography, chronopotentiometry, coulometric procedures), instrumental methods in gen inc mass spectroscopy and nmr inc FT types: also short courses on computer programming (Fortran and Basic), theory of electronic networks, applications to industrial and environmental problems (SERC). Contact Professor FGA Stone  
**74:101** Bristol, *Surface chemistry and colloids*, MSc, 1c yr f-t (gd hons deg in chem, biochem or physics req); *course content*: nature of surfaces and thermodynamics of adsorption, capillary condensation, chemisorption at solid surfaces; adsorption at liquid interfaces, surface active agents; electrical double layer, colloid stability, thin films; hydrodynamics and light scattering in colloids, synthetic and natural polymers; nucleation and growth of particles, microscopy, spectroscopy, x-ray diffraction and rheology of colloids; 3 mths research project (SERC). Contact Professor RH Ottewill  
**74:102** Bristol Poly, *Instrumental analysis*, MSc (CNAAB)  
**74:103** City, *Industrial and administrative sciences*, MSc/Diploma  
**74:104** East Anglia, *Chemical education*, MSc  
**74:105** East Anglia, *Chemical physics*, MSc  
**74:106** East Anglia, *Chemical spectroscopy*, MSc  
**74:107** East Anglia, *Co-ordination chemistry*, MSc  
**74:108** East Anglia, *Heterocyclic chemistry*, MSc  
**74:109** East Anglia, *Physical organic chemistry*, MSc  
**74:110** East Anglia, *Spectroscopic and physical methods of chemical analysis*, MSc  
**74:111** Essex, *Aerosol science and technology*, MSc See page 329  
**74:112** Glasgow, *Applications of radiochemistry in inorganic and surface chemistry*, MSc  
**74:113** Hatfield Poly, *Industrial chemistry*, MSc (CNAAB)  
**74:114** Hull, *Analytical science*, MSc/Diploma  
**74:115** Kingston Poly, *Analytical chemistry*, MSc (CNAAB)  
**74:116** Lancashire Poly, *Analytical chemistry*, MA (Lancaster)  
**74:117** Lancaster, *Analytical chemistry*, MA  
**74:118** Leeds, *Colour chemistry*, MSc, 1-2 yrs f-t; *syllabus*: intro to colouring matters, coloration and colour measurement; org chem of dyes and pigments; spectroscopy and prediction of colour; physical properties of colouring matters; practical project work. Contact Dr G Hallas  
**74:119** Liverpool Poly, *Analytical chemistry*, MSc (CNAAB)  
**74:120** London (Birkbeck), *Analytical chemistry*, MSc  
**74:121** London (Birkbeck), *Computer modelling of molecular and biological processes*, MSc  
**74:122** Loughborough, *Analytical chemistry and instrumentation*, MSc/ALUT, 1c yr f-t: available p-t; intended for those aspiring to senior appointments in industry etc; *course content*: adv classical analysis, atomic and molecular absorption and luminescence analysis, electron spectroscopy and x-ray methods, nmr and esr spectroscopy, mass spectroscopy, electro-analytical methods, radiochem analysis, thermal methods of analysis, enzymatic and immunol methods of analysis and microbiol assay, chromatographic and electrophoretic methods of analysis, optical and electronic

# Physical sciences chem

- principles of instrument design automated chem analysis applications of above  
 (may be carried out in place of employment) (SERC) Contact GE Beck
- 74 123 Loughborough, *Medicinal chemistry* MSc/ALUT 1c yr f t available p-t concerns  
 standing of chem and biol mechanisms of drug action course content concepts in d  
 drug-cell interactions (pharmacology microbiol immunol) drug presentation d  
 nuclear medicine legal aspects research project (MRC) Contact GE Beck
- 74 124 Manchester (UMIST), *Petrochemicals and analytical science* MSc/Diploma  
 74 125 Manchester (UMIST), *Analytical chemistry* MSc (CNAAC)  
 74 126 Newcastle Poly, *Strategies in organic synthesis* MSc/Diploma (CNAAC)  
 74 127 NE Wales IHE, *Chemistry* MSc (Salford)  
 74 128 N Staffs Poly, *Analytical chemistry* MSc (CNAAC)  
 74 129 Poly of North London *Synthetic organic chemistry* MSc (CNAAC)  
 74 130 Reading, *Chemical education* MSc  
 74 131 Salford, *Analytical chemistry* MSc  
 74 132 Salford, *Applied heterocyclic chemistry* MSc  
 74 133 Salford, *Radiochemistry radiation chemistry and nuclear technology* MSc  
 74 134 Salford, *Chemical pollution monitoring* MSc/Diploma (CNAAC)  
 74 135 Sheffield City Poly *Instrumental chemical analysis* MSc (CNAAC)  
 74 136 Sheffield City Poly *Electrochemical science* MSc  
 74 137 Southampton *Instrumental methods of analysis* MSc/Diploma 1c 2c yrs f t 2c 3c yrs p-t (M  
 74 138 Strathclyde, *Instrumental methods of analysis* MSc/Diploma 1c 2c yrs f t 2c 3c yrs p-t (M  
 1c yr f t (Diploma) spref to metallurgical and trace analysis syllabus atomic spectra (principle  
 atomic spectroscopy atomic structure) atomic absorption spectrometry (flame electrotherm  
 atomisation hydride generation and cold vapour procedures) atomic emission spectromet  
 (theory of emission spectrometry characterisation of flames plasmas arc spark hollow cathod  
 discharges) atomic fluor spectrometry chromatography (GC HPLC ion exchange principles o  
 centrifugal analysers flow injection) automatic methods of analysis (automatic analysers  
 separation) computers in analytical chem electroanalytical chem (potentiometry anodic strip  
 ping voltammetry coulometry principles of techniques) equilibria in analytical chem kinetic  
 analysis of importance in analytical chem mass spectrometry principles of metallurgical analysis  
 course at reactor centre) Raman and i r spectroscopy sampling and sample preparation stats  
 surface analysis (X ray photoelectron spectroscopy Auger electron spectroscopy SIMS X ray  
 diffraction) UV/Vis spectrophotometry X ray fluor spectrometry (energy dispersive and  
 wavelength dispersive) detailed lab exercises industrial visits thesis for MSc (SERC)
- 74 140 Surrey, *Chemical and biochemical sciences and education* MSc/Diploma 2 yrs p-t (MSc) 1 yr p-t  
 (Diploma) course content term 1 revision of fundamental concepts in physics and chem molecu  
 lar biol (for chemists only) basic principles of quantum theory and factors determining extent and  
 rate of chem processes (for biologists only) educational component (curriculum studies) terms 2  
 and 3 production of detergents and pharmaceuticals (research lab to market place) enzymes  
 (kinetics and mechanism) mitochondria and chloroplasts computing educational studies (as  
 term 1) teaching project yr 2 (for MSc) 3 options from biochem mod methods of synthesis and  
 structure determination in chem chem analysis in industry biotechnology applications of com  
 puter methods microelectronics and math techniques to problems in chem biochem and biol  
 educational component (modular integrated environmental and applied approach to science  
 teaching chem biol and GCSE leadership and organisation science technology and society)  
 individual teaching project (recognised for secondment by DES) Contact Dr TM Poole Chemis  
 try Department
- 11 Sussex, *Chemical physics* MSc 1c yr f t course content terms 1 and 2 emphasis on molecular  
 and electronic structure determination through spectroscopic techniques use of lasers molecular  
 reaction dynamics using molecular beam and laser techniques choice of options from list inc chem  
 physics in industry astrophysical chem high temp chem term 3 project leading to dissertation  
 Contact Professor AJ McCaffery
- Sussex, *Medicinal chemistry* MSc 1c yr f t application of chem and biochem to development of  
 new drugs course content intro medicinal chem chem and mechanism of actio  
 co-enzymes chem and mode of action of hormones structure and  
 graph cs and drug design structure and biochem of selected n
- la vitamins and  
 computer  
 lism and

pharmacokinetics, action of drugs (inc discussion of antibiotics, anti-hypertensive, anti-ulcer, anti-fertility, anti-inflammatory, cardiac and anti-parasitic drugs, CNS drugs, analgesics, histamine H-2 antagonists and enzyme inhibitors as drugs); exam and dissertation. Contact Professor AJ McCaffery

- 74:143** **Sussex, Organometallic chemistry**, MSc, 1c yr f-t; *course content*: cpds of particular elements, structures, bonding, reactions, reaction mechanisms, radicals, thermochem, clusters, spectroscopy, X-ray diffraction, applications in org synthesis and catalysis (inc polymer chem); exam, literature survey and dissertation on 8 mth research project. Contact Professor AJ McCaffery
- 74:144** **Thames Poly, Chemical analysis**, MSc/Diploma (CNA A)
- 74:145** **Ulster, Applications of chemical spectroscopy**, MSc
- 74:146** **Wolverhampton Poly, Instrumental chemical analysis**, MSc/Diploma (CNA A)
- 74:147** **York, Chemistry**, MSc
- 74:148** **York, Chemistry and chemical education**, MSc

## Certificates and diplomas

- 74:149** **Aberdeen, Advanced chemistry**, Diploma
- 74:150** **Cambridge, Chemistry**, Certificate
- 74:151** **East Anglia, Chemical sciences**, Diploma
- 74:152** **East Anglia, Chemistry and chemical education**, Diploma
- 74:153** **Edinburgh, Environmental chemistry**, Diploma
- 74:154** **Essex, Chemistry**, Diploma
- 74:155** **Lancaster, Chemistry**, Diploma
- 74:156** **London (RHBC), Chemistry**, Diploma

# University of East Anglia

## PhD, MPhil and MSc degrees in Chemistry

One-year courses leading to an MSc degree in co-ordination chemistry, synthetic organic chemistry, physical organic chemistry, heterocyclic chemistry, chemical spectroscopy, chemical physics, spectroscopic and physical methods of chemical analysis, and chemical education.

Two- or three-year courses leading to MPhil or PhD degrees in all branches of physical, inorganic and organic chemistry.

Enquiries and applications should be made to: The Senior Administrative Assistant,  
School of Chemical Sciences, University of  
East Anglia, Norwich NR4 7TJ, UK.  
Tel: (0603) 56161 ext 2020

## UNIVERSITY OF EAST ANGLIA

### Instrumental Methods in Chemical Analysis

Degree MSc

Length of course 1 year full-time

No of places 12

**Description of course** One-year MSc course in spectroscopic and physical methods of chemical analysis. This course provides a training in the principles and practice of a wide range of instrumental methods of chemical analysis, including infra red, ultraviolet, nuclear magnetic resonance and mass spectroscopies, plus chromatographic and electroanalytical techniques. Practical experience is provided in these methods as well as in electronics, computing and microprocessor use. Tuition is given both in the fundamental principles of the techniques and on methods of analysis in environmental chemistry, in forensic science, and in the petrochemical, polymer and pharmaceutical industries.

**Entrance requirements** Applicants should have a good honours degree, or suitable combination of alternative qualifications and experience, in chemistry or in other subjects with a substantial chemistry content.

**Grant** This course is supported by the Science and Engineering Research Council.

**Head of department** Dr R A Y Jones

**Application and enquiries** The Senior Administrative Assistant, School of Chemical Sciences, University of East Anglia, Norwich NR4 7TJ. Telephone 0603 56161.

# UNIVERSITY OF ESSEX

## CHEMISTRY AND BIOLOGICAL CHEMISTRY MSc/MPhil/PhD

**MSc BY ADVANCED STUDY** One year taught courses including a supervised project/dissertation

**Aerosol Science and Technology** A course in the physical and chemical properties of aerosols including applied and industrial aerosol science

**Molecular Biochemistry** The course emphasises the application of modern techniques for studying the structure and dynamics of biological systems at the molecular level

### MSc/MPhil/PhD BY RESEARCH

**Research areas** Synthetic inorganic chemistry coordination chemistry of transition metals Mössbauer spectroscopy physical organic chemistry organometallic chemistry mass spectrometry NMR and ESR aerosol and atmospheric chemistry and physics biological applications of laser spectroscopy biological membranes enzymology including metalloenzymes protein chemistry medical applications of biological chemistry

Enquiries to: The Chairman, Department of Chemistry  
University of Essex, Colchester CO4 3SQ  
Telephone (0206) 862286

# London (Royal Holloway and Bedford New College)

## Chemistry MPhil/PhD

Supervision available: current research includes organic and inorganic reaction mechanisms free radical and photochemical Polyhalogeno aromatic systems Polycyclic aromatic synthesis Acyclic polyols carbohydrates and bacterial polysaccharides Calorimetry of drug/microbial systems pharmaceuticals polyhalides organic and inorganic systems Organometallic chemistry — Si and cluster compounds Bioinorganic chemistry — metals in plants environmental studies porphyrins antibiotic and antitumor agents NMR work in fluorinated organic compounds relaxation studies Wide range of spectroscopic studies especially vibrational and Raman Mass spec esp CI and Ion-Molecule reactions

### LC ESR

Contact Professor M J Perkins Department of Chemistry  
Royal Holloway and Bedford New College Egham Hill  
Egham Surrey

# PLYMOUTH POLYTECHNIC MPhil/PhD Chemistry

Supervision available: current research includes

**Marine Chemistry** Distribution of naturally occurring amino acids organic tracers for sewage sludge nitrogen containing organic macromolecules synthetic and natural hydrous iron oxides metal methylate on as a transport mechanism in estuaries microstructures of estuarine particles pollutants biogeochemical cycling of terpenoid compounds

**Analytical chemistry** Inductively-coupled plasma emission spectroscopy both fundamental studies automatic instrument optimisation by computer control and a wide range of solid samples — minerals whole coal agricultural samples forensic science atomic absorption spectroscopy mechanisms of hydride decomposition transition metal carbonyls Interfacing with GC and HPLC ultra trace metal determinations in pressurised water reactor coolant trace metals in atmospheric aerosols polycyclic aromatic hydrocarbons in diesel exhaust and soot during combustion

**Organic Geochemistry** Kerogen-mineral reactors and maturation by GC-MS

**Physical Chemistry** Computational method for the study of the thermophysical properties of gases gas viscosity at high temperatures

**Biological chemistry** Enzymology of gout and rheumatoid arthritis glycosaminoglycan in human serum

**Inorganic chemistry** Reactivity of transition metal nitrides and carbides carbons and cokes in blast furnace practice concept learning in secondary school chemistry

For further information please contact: The Academic Registrar Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA. Tel 0752 221312

# UNIVERSITY OF SALFORD CHEMISTRY: MSc/PhD

**MSc BY ADVANCED STUDY** one year taught courses including a supervised project/dissertation

**Analytical Chemistry** The course covers separation chemistry atomic and molecular spectroscopy solution analysis computation with options in radiochemistry

**Radiochemistry Radiation Chemistry and Nuclear Technology** Modular course which covers health physics measurement of radioactivity radioisotope techniques and applications radiation chemistry

**Thermal Analysis** A course combining all aspects of thermal analysis theory and practice

### MSc/PhD BY RESEARCH

**Research areas** Analytical Chemistry Colloid and Surface Chemistry Electrochemistry and Heterogeneous Processes Fast Reactions Techniques Mass Spectrometry Organic Chemistry (particularly involving synthesis of biologically active molecules organic reaction mechanisms and intermediates photo-reactions and synthesis) Organometallic Chemistry Polymer Chemistry Rad-on and Rad-in Chemistry Solid State and Zeolite Chemistry Spectroscopy — ESR, NMR IR and Laser Raman Theoretical Chemistry

Enquiries to: The Departmental Administrator Department of Chemistry and Applied Chemistry University of Salford Salford M5 4WT Tel 061 736 5843 ext 1



## 75 Physical sciences: crystallography

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

**75:1 London (Birkbeck), Crystallography, MPhil/PhD**

**75:2 Manchester (UMIST), Pure and applied physics, MSc/PhD**

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

**75:3 London (Birkbeck), Crystallography, MSc, 1 yr f-t; 2 yrs p-t; joint course with London (UC), available p-t at London (Birkbeck) only; designed to give knowledge of diffraction techniques and electron microscopy, understanding of crystalline inorg and org structures, study of more complex biomolecular structures such as proteins, nucleic acids and viruses; also topics on less-crystalline aspects of matter such as cement and its composites and amorphous states such as liqs and glassy solids; qual course available for entrants without relevant deg; *course content:* inc biomolecular structure, mod materials and industrial techniques, applications of electron microscopy; continuous assessment of coursework, written exam, essay paper and oral (SERC). Contact Professor TL Blundell**

**75:4 London (UC), Crystallography, MSc**

# Physical sciences: electronics

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies' section

- Aberdeen, Natural philosophy, MSc/PhD  
Durham, Applied physics and electronics, MSc/PhD  
East Anglia, Electronics, MPhil/PhD supervision available for research in School of Information Systems, research interests inc CAD of digital systems inc investigation of algorithmic methods and development of software tools (sponsored by SERC Alvey) speech recognition by means of neural network computer models (sponsored by British Telecom Research Laboratories) under water acoustics inc transducer design data transmission remote sensing and evolution of relevant expert system design tools (sponsored by SERC Marine Technology Directorate Plessey Marine Ltd and various other industrial concerns) Contact Senior Administrative Assistant SIS, UEA  
6 4 Keele, Electronics, MSc/PhD  
6 5 Newcastle Poly, Electrical engineering and physical electronics, MPhil/PhD (CNAAB)  
6 6 Southampton, Electronics and information engineering, MPhil/PhD  
6 7 Wales (UWIST), Electronics, MEng/MSc/PhD  
6 8 Wales (UWIST), Microelectronics and semiconductor devices, MSc/PhD  
6 9 Warwick, Electronics, MPhil/PhD  
6 10 York, Electronics, MPhil/DPhil See page 332

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses

- 76 11 Belfast, Electronics, MSc  
76 12 Belfast, Opto-electronics and optical information processing, MSc  
76 13 Durham, Electronics, MSc  
76 14 Durham, Engineering (microelectronics), MEng  
76 15 Essex, Lasers and their applications, MSc 1 yr f t available p-t (hons deg or approved lesser qual plus experience req) joint course with St Andrews p-g training in mod optics and semiconductor physics tailored to needs of optoelectronics industry fundamental properties of optoelectronic materials and experience of technology and operation of wide range of laser and semiconductor devices at both univ and in industry details available from either univ (SERC Contact Professor BS Wherrett)  
76 17 Lancaster, Semiconductor devices, MSc  
76 18 Middlesex Poly, Microelectronics engineering, MSc/Diploma  
76 19 Newcastle Poly, Opto-electronics, MSc/Diploma (CNAAB)  
76 20 Nottingham, Modern electronics, MSc  
76 21 St Andrews, Opto-electronic and laser devices, MSc  
76 22 Southampton, Electronics, MSc/Diploma  
76 23 Wales (UWIST), Electronics MSc/Diploma

### Certificates and diplomas

76:24 Lancaster, *Physics and electronics*, Diploma

76:25 Newcastle, *Applied electronics*, Diploma/Certificate

76:26 St Andrews, *Electronics*, Diploma

76:27 St Andrews, *Opto-electronics and laser devices*, Diploma

## UNIVERSITY OF YORK

### Department of Electronics

MPhil/DPhil research projects are available in most areas of Electronic Engineering including the following:-

- ★ Electromagnetic compatibility
- ★ Communication techniques
- ★ Speech coding, recognition and synthesis
- ★ Image processing and computer vision
- ★ Music technology
- ★ Flight control systems
- ★ Microelectronic technology including plasma processing
- ★ Low-dimensional semiconductor devices

*For further details please write to*  
Professor G G Bloodworth  
Department of Electronics  
University of York  
York YO1 5DD

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advertisements  
for additional  
information

Index starts on  
page 518

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 77.1** Aberdeen, *Geology*, MSc/PhD  
**77.2** Aston, *Geological sciences*, MPhil/PhD  
**77.3** Belfast, *Geology*, MSc/PhD  
**77.4** Birmingham, *Geological sciences*, MSc/PhD  
**77.5** Bristol, *Geology*, MSc/PhD  
**77.6** Cambridge, *Earth sciences*, MSc/PhD  
**77.7** : . .  
**77.8** : . .  
**77.9** : . .

ontogeny of silicified trilobites from N America, *stratigraphy* Ordovician rocks of Oslo region of Norway, and S Scotland **Contact** Professor DM Ramsay

- 77:11 East Anglia, *Environmental sciences*. MPhil/PhD, wide range of research, principal areas of

management, human geog., locational analysis, rural and urban planning, environmental

Quaternary geol, chem of rainfall and long term changes in atm composition, lab and field studies of lower continental crust, urban conservation, coastal geomorphology of E Anglia, soil science, remote sensing and pre Hispanic agriculture, deposition of pollutants Contact D Marshall

- 77:12 Edinburgh, *Geology*, MPhil/PhD  
77:13 Fyfe, *Geology*, MPhil/PhD  
77:14 " "  
77:15 " "  
77:16 " "  
77:17 " "  
77:18 Lancaster, *Solid earth geophysics and geology*, MPhil/PhD  
77:19 Leeds, *Earth sciences*, MPhil/PhD See page 337  
77:20 Leicester, *Geology*, MPhil/PhD

reserve calculation, micropalaeontology esp Ostracoda, speleology. **Contact** Registrar (Higher Degrees)

**77:21 Liverpool, Geological sciences**, MSc/PhD; research and supervision in all main branches of geol, inc structural geol, sedimentology, geochem, palaeontology and stratigraphy, mineralogy and petrology, eng geol, geophysics. **Contact** Dr PJ Brenchley

**77:22 London (Birkbeck), Geology**, MPhil/PhD

**77:23 London (Goldsmiths'), Geology**, MPhil/PhD

**77:24 London (Imperial), Engineering geology**, MPhil/PhD

**77:25 London (Imperial), Geology**, MPhil/PhD

**77:26 London (Queen Mary), Geography and earth science**, MPhil/PhD

**77:27 London (RHBC), Geology**, MPhil/PhD; supervision available, main areas of research: *geochem*: crust-mantle interactions, low temp geochem; *basin dynamics*: study of crustal dynamics and basement controls of basin evolution, structural geol and tectonics, palaeontology. **Contact** Dr JN Walsh

**77:28 London (UC), Geology**, MPhil/PhD

**77:29 Manchester, Geology**, MSc/PhD; supervision available, interests in: stratigraphy, sedimentology, structural geol, palaeontology, igneous and metamorphic petrology, mineralogy, geochem, econ geol, exptl petrology, geophysics; projects inc: petrology, mineralogy and geochem of layered intrusions, granites, alkaline rocks, volcanic rocks, laterites and ore deposits; silicate systems at high pressure and temps; carbonatites and kimberlites; transport of elements in vapour phase; synthesis of complex sulphides; metamorphism in Alps and Scottish Caledonides; structural studies in Caledonides of Norway, Sweden, N Wales and Scotland; sedimentology (S and C Wales, N England, Libya, Majorca); calcrites; coal geol; carboniferous ostracoda; palaeoecology; trace fossils; palaeobotany (Lower Cretaceous floras); x-ray and electron microscope studies of structures and phase transformations of minerals and metamorphic reactions; thermal expansions of silicate crystals and melts; computer graphics in geol and geophysics; data collection and processing with field microcomputers. **Contact** Professor Jack Zussman

**77:30 Newcastle, Geology**, MSc/PhD

**77:31 N Staffs Poly, Geological sciences**, MPhil/PhD (CNA); supervision available for research in: structural geol, mineral deposits and their geochem and geophysical expression, carbonate sediments and assoc faunas. **Contact** Dr MJ Fleuty

**77:32 Nottingham, Geology**, MPhil/PhD

**77:33 Open, Earth sciences**, BPhil/MPhil/PhD

**77:34 Oxford, Earth sciences**, MSc/DPhil

**77:35 Oxford Poly, Geology and physical sciences**, MPhil/PhD (CNA); supervision available, gen research areas: *geol*: petrogenesis of igneous rocks; mineralisation in cratonic and orogenic regions; sedimentology in coalfield areas and volcanic environments; taxonomy, evolution and ecology of Mesozoic faunas; use of computers in geol; *physical sciences*: studies of carbaboranes, boron hydrides and related substances; studies of amino acids and sulphur cpds; use of lasers, computers and raman spectroscopy in physical sciences; energy characteristics of alpha particles in various media; optical properties of materials for solar energy conversion; *specific grad projects*: geol studies in Fiji; petrogenesis of igneous rocks in Channel Islands; geol studies of Closepet granite, India; sedimentology in Midland Valley, Scotland; optical techniques for non-invasive physiol measurements; computer simulations of scientific instruments; transparent coatings for energy efficient windows; optical bio-sensors for medical applications. **Contact** Dr H Colley

**77:36 Poly of North London, Geography**, MPhil/PhD

**77:37 Portsmouth Poly, Geology**, MPhil/PhD (CNA)

**77:38 Reading, Geology**, MPhil/PhD

**77:39 St Andrews, Geology**, MSc/PhD

**77:40 St Paul & St Mary's C, Geology**, MPhil/PhD (CNA)

**77:41 Sheffield, Geology**, MSc/PhD; supervision available, research areas inc: *micropalaeontology*: biostratigraphical work esp study of dinoflagellates in relation to Tertiary zonation, palaeoecology esp specific studies on relationship of palynomorphs to facies (palynofacies) in oilfields of N Sea; *macropalaeontology*: Lower Palaeozoic trilobite and trace fossil studies; *sedimentology*: esp sedimentary geochem, reactions betwn sediments and porewaters of different compositions; *igneous petrology*: layered basic intrusives of Galway and Hebridean province; *upper mantle studies*: periodotite and eclogite inclusions in high-grade metamorphic rocks of basal gneiss region of W Norway being mapped to estab relationship to gneisses, studies on kimberlites; *econ geology*: base metal deposits of UK, Europe and USA, inc hydrogeochem and stream sediment geochem,

K-Ar geochronology, S, O and C isotope studies, *eng geol* site investigations involving eng properties of shales, compaction of coal measures rocks and hydrogeology of chalk **Contact** Professor JB Dawson

- 77.42 Southampton, *Geology*, MPhil/PhD**, supervision available, research interests inc Archaeol geol in Australia esp assoc of nickel sulphides and ultramafic rocks, geochem of Archaeol basaltic komatites and tholeiites, marine geophysics and marine geol, palaeomagnetism and magnetic fabrics, biostratigraphy, applications of conodonts, re-evaluation of environments of deposition of Lower Carboniferous rocks of N Pennines esp Yorkshire, mineralogy and paragenesis of clay

- 77.43** .....  
**77.44 Strathclyde, *Applied geology*, MSc/PhD**  
**77.45 Sunderland Poly, *Applied geology*, MPhil/PhD (CNA)**  
**77.46 Ulster, *Environmental studies*, MPhil/DPhil**  
**77.47 Wales (Aberystwyth), *Geology*, MSc/PhD**, research programmes inc *marine geol* geol of W continental shelf of British Isles, geol mapping, direct rock sampling sedimentation and ecology of live and dead organisms, *palaeontology and stratigraphy* construction of graptolites, Lower Ordovician stratigraphy and palaeontology, evolution of Mesozoic bivalves Silurian stratigraphy of Brecon anticlinal, *geochem* applied geochem, primary dispersion patterns of selected elements in country rocks adjacent to mineral deposits, *tectonic behaviour of soft sediments* rheological properties of sediments and possible structures produced by deformation before lithification Lake District, W Islay, Alps and Pyrenees, lab study using scanning electron microscopy, exptl simulation of possible processes, *Precambrian studies* W Greenland Archaeol, inter relationships between deformation, metamorphism and magmatism, detailed geochem and isotope studies sedimentation, magmatism, deformation and metallogenesis in Pan African belt, Nigeria,

- 77.48** .....  
**77.49** .....  
**77.50** .....

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses

- 77.51** .....  
**77.52** .....  
**77.53** .....  
**77.54** .....  
**77.55 City of London Poly, *Quaternary studies*, MSc (CNA)**  
**77.56 Durham, *Engineering geology*, MSc**  
**77.57 Hull, *Micropalaeontology*, MSc**  
**77.58 Leeds, *Engineering geology*, MSc**  
**77.59 Leeds, *Geochemistry*, MSc, 1 2c yrs f t (hons deg in geol and/or chem sciences req)**, *course content* inc equilibrium thermodynamics and kinetics of water rock reactions at high and low temp, environmental geochem and hydrocarbon source bed evolution, isotope systematics and radiometric age dating, geochem exploration, geochem of econ deposits, computer programming, analytical training inc classical wet chem methods and instrumental techniques, eg x ray fluor, x ray diffraction, atomic absorption, electron microprobe, atomic emission spectrography and

mass spectrometry (NERC). Contact Dr WJ Varker

- 77:60 Leicester**, *Mineral exploration and mining geology*, MSc/Diploma, 1 yr f-t; *course content*: geochem and geophysical prospecting, mineral exploration, mining economics, mining geol, ore microscopy, photogeol, principles of mineral dressing, elements of mining, structural geol, econ mineralogy, surveying (NERC). Contact Registrar (Higher Degrees)
- 77:61 London (Birkbeck)**, *Stratigraphy*, MSc
- 77:62 London (Imperial)**, *Engineering geology*, MSc/DIC
- 77:63 London (Imperial)**, *Mineral exploration*, MSc/DIC
- 77:64 London (Imperial)**, *Petroleum geology*, MSc/DIC
- 77:65 London (Imperial)**, *Structural geology and rock mechanics*, MSc/DIC
- 77:66 London (RHBC)**, *Basin evolution and dynamics*, MSc
- 77:67 London (UC)**, *Hydrogeology*, MSc/Diploma
- 77:68 London (UC)**, *Micropalaeontology*, MSc/Diploma
- 77:69 Newcastle**, *Organic petrology and organic geochemistry*, MSc
- 77:70 Poly of North London**, *Quaternary studies*, MSc (CNAAB)
- 77:71 Reading**, *Sedimentology and its applications*, MSc
- 77:72 Sheffield**, *Palynology*, MSc
- 77:73 Wales (Aberystwyth)**, *Micropalaeontology*, MSc/Diploma, 1 yr f-t; *course covers*: zoological micropalaeontology with emphasis on application of foraminifera and ostracods to stratigraphic problems and their value in oil field exploration (NERC). Contact Dr JR Haynes

## Certificates and diplomas

- 77:74 East Anglia**, *Environmental sciences*, Diploma, 1 yr f-t; conversion course for grads in other disciplines, or to deepen and broaden expertise for grads in environmental discipline; *course content*: choice of course units to meet individual reqs; possible areas of specialisation: air pollution, climatic change, ecology, environmental chem, environmental risks, soil and water management, surface processes and hydrology, water resources and amenity. Contact D Marshall
- 77:75 Kingston Poly**, *Analysis of geological data*, Diploma (CNAAB)
- 77:76 Leicester**, *Geological studies*, Diploma

## University of Leeds

### MPhil/PhD: Earth sciences

Supervision is available in the following fields

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Research facilities include the following special  
equipment: X-ray fluorescence analysis unit

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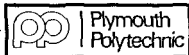
testing equipment

Further information from The Department of  
Earth Sciences University of Leeds Leeds  
LS2 9JT

## PLYMOUTH POLYTECHNIC MPhil/PhD (CNAAB) Geological Sciences

Current research interests in  
micropalaeontology,  
palynology, sedimentology,  
marine geology, marine  
geophysics, petrology of recent  
lavas, structural geology and  
clay mineral diagenesis

Contact The Academic Registrar  
Plymouth Polytechnic  
Drake Circus  
Plymouth PL4 8AA  
Tel 0752 221312





## 78 Physical sciences: geophysics

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 78:1 Bath, Physics, MSc/PhD**
- 78:2 Birmingham, Geological sciences, MSc/PhD**
- 78:3 Durham, Geological science, MSc/PhD**
- 78:4 East Anglia, Environmental sciences, MPhil/PhD**
- 78:5 Edinburgh, Geophysics, MPhil/PhD**
- 78:6 Exeter, Geophysics, MPhil/PhD**
- 78:7 Lancaster, Solid earth geophysics and geology, MPhil/PhD**
- 78:8 Leeds, Earth sciences, MPhil/PhD**
- 78:9 Liverpool, Geophysics, PhD; supervision available, studies inc palaeomagnetism applied to magnetostratigraphic and tectonic problems, geomagnetism, geochronology using radiometric dating methods (Ar/Ar), earthquake seismology applied to tectonic problems, earthquake source mechanisms, seismic hazard and risk assessment, math modelling of geodynamic processes with applications to thermal and mechanical properties and behaviour of lithosphere and formation of sedimentary basins. Contact Professor NJ Kusznir**
- 78:10 London (Imperial), Geophysics, MPhil/PhD**
- 78:11 Newcastle, Geophysics and planetary physics, MSc/PhD**
- 78:12 Reading, Geology, MPhil/PhD**
- 78:13 Wales (Cardiff), Geology, MSc/PhD**
- 78:14 York, Physics, MPhil/DPhil**

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 78:15 Birmingham, Applied geophysics, MSc**
- 78:16 Durham, Geophysics, MSc**
- 78:17 Leeds, Exploration geophysics, MSc, 1c yr f-t (hons deg in physics, earth sciences, geol or mining req); syllabus: gen range of exploration geophysics inc intro to geophysics and its application in prospecting and earth structure, gravitational, magnetic, electrical and seismic methods, data processing; plus practical work (NERC). Contact Dr WJ Varker**
- 78:18 London (Imperial), Exploration geophysics, MSc/DIC, 1 yr f-t (hons deg in earth sciences, physical or eng sciences req, other quals considered; approved standard in maths also req); course content inc: time series analysis, filter theory and inverse theory, seismic data acquisition, processing and interpretation, borehole geophysics, gravity and magnetic exploration methods, electrical and e-n exploration methods, gamma-ray spectrometry, remote sensing, petroleum geol, mineral deposits, geol, sedimentary environments; fieldwork and dissertation (NERC). Contact Professor MF Worthington**
- 78:19 London (UC), Marine geophysics, MSc**
- 78:20 Newcastle, Geophysics and planetary physics, MSc**
- 78:21 Wales (Bangor), Marine geotechnics, MSc/Diploma**
- 78:22 Wales (Bangor), Water resource geophysics, MSc/Diploma**

## Certificates and diplomas

78 23 East Anglia, *Environmental sciences*, Diploma  
78 24 Leeds, *Applied geophysics*, Diploma

Physical sciences geophysics

original

78 23  
78 24  
78 25  
78 26

## 79 Physical sciences: mathematical physics

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 79:1** Aston, *Mathematics and physics*, MPhil/PhD
- 79:2** Birmingham, *Mathematical physics*, MSc/PhD
- 79:3** City, *Mathematics*, MPhil/PhD
- 79:4** Edinburgh, *Mathematical physics*, MPhil/PhD
- 79:5** Glasgow, *Mathematical physics*, MSc/PhD
- 79:6** London (Birkbeck), *Mathematics*, MPhil/PhD
- 79:7** London (Imperial), *Mathematics*, MPhil/PhD
- 79:8** Southampton, *Applied mathematics*, MPhil/PhD

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 79:9** Salford, *Computational physics*, MSc

### Certificates and diplomas

- 79:10** London (Imperial), *Mathematical physics*, DIC
- 79:11** Wales (Swansea), *Mathematical physics*, Diploma

## 80 Physical sciences: meteorology

### Higher degrees by research

- 80 1 East Anglia, *Environmental sciences*, MPhil/PhD  
 80 2 Edinburgh, *Meteorology*, MPhil/PhD  
 80 3 Lancaster, *Atmospheric science*, MPhil/PhD  
 80 4 London (Imperial), *Atmospheric physics and dynamics*, MPhil/PhD  
 80 5 Manchester (UMIST), *Pure and applied physics*, MSc/PhD  
 80 6 Oxford, *Atmospheric physics*, MSc/DPhil supervision available main research interests physical processes (eg radiation dynamics photochem) in neutral atms of Earth and planets and in Earth's oceans measurement of atm temp and composition fields by invention development and construction of instruments for various satellites use of data for studies of atm circulation and its relationship to fields of radiation and composition basic theoretical work in geophysical fluid dynamics inc gen circulation of oceans and atms interaction between planetary waves and mean

processes which maintain climates of Earth Mars and Venus CONTACT OF 1 W 14501

- 80 7 Reading, *Meteorology*, MPhil/PhD  
 80 8 Southampton, *Physics*, MPhil/PhD

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses

- 80 9  
 80 10  
 80 11  
 80 12  
 80 13

### Certificates and diplomas

- 80 14 East Anglia, *Environmental sciences* Diploma

## 81 Physical sciences: oceanography

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

**81:1 East Anglia, Environmental sciences, MPhil/PhD**

**81:2 Liverpool, Oceanography, MSc/PhD**

**81:3 Southampton, Oceanography, MPhil/PhD;** supervision available in following research fields: ocean modelling and dynamics of upper ocean; circulation and mixing or dispersion of tracers in shallow seas and deep ocean; satellite remote sensing (inc visible, i-r and microwave sensors); palaeomagnetism of marine and continental rocks; applications to geophysical evolution of N Atlantic and other ocean basins; magnetostratigraphy; application of magnetic fabric measurement to sediment transport studies of recent and ancient sediments; marine seismology; sedimentary processes at convergent plate margins; occurrence, distribution and speciation of certain chem constituents, analytical procedures for very low concentrations; marine org chem and cycling of org material; benthic ecology; zooplankton ecophysiol; volume and ionic regulation of marine and brackish water organisms; ecological significance of behavioural and physiol rhythmicity in marine invertebrates; microbial planktonic processes and primary production studies; modelling of estuarine processes. **Contact Dr EA Hailwood (Admissions Tutor)**

**81:4 Wales (Bangor), Oceanography, MSc/PhD**

**81:5 Wales (Swansea), Oceanography, MSc/PhD**

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

**81:6 Southampton, Oceanography, MSc/Diploma** *See page 343*

**81:7 Wales (Bangor), Physical oceanography, MSc/Diploma**

### Certificates and diplomas

**81:8 East Anglia, Environmental sciences, Diploma**

**81:9 Liverpool, Marine pollution chemistry, Diploma**



Department of Oceanography  
**UNIVERSITY OF  
SOUTHAMPTON**  
MSc Oceanography

This 12-month multidisciplinary course commences with an introduction to the concepts and methods of oceanography, with lectures, seminars, laboratories and boat work in all main aspects of the subject. This introduction is followed by a selection of specialist lectures covering the main topics of oceanography. The course is completed by a project which is carried out during the summer months and the results are presented as a dissertation.

Applications can be considered from candidates with a good honours degree in biology, chemistry, physics or geology, or related subject areas.

# Overseas students

See editorial on  
page 7 onwards  
for information on  
UK postgraduate  
study

## 82 Physical sciences: optics

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 82:1 Aston, Vision sciences, MPhil/PhD**
- 82:2 Bradford, Ophthalmic optics and visual science, MPhil/PhD**
- 82:3 City, Optometry and visual science, MPhil/PhD**
- 82:4 London (Imperial), Optics, MPhil/PhD**
- 82:5 Manchester, Physics, MSc/PhD**
- 82:6 Manchester (UMIST), Ophthalmic optics, MSc/PhD**
- 82:7 Manchester (UMIST), Pure and applied physics, MSc/PhD**
- 82:8 Reading, Physics, MPhil/PhD**
- 82:9 Southampton, Physics, MPhil/PhD**
- 82:10 Wales (UWIST), Optometry, MSc/PhD**

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 82:11 Belfast, Opto-electronics and optical information processing, MSc**
- 82:12 Bradford, Ophthalmic optics, MSc**
- 82:13 City, Visual science, MSc**
- 82:14 London (Imperial), Applied optics, MSc/DIC, 1c yr f-t (hons deg in physics, maths or electrical eng subj req); core courses:** geom optics and aberration theory, coherent and incoherent image formation, elem optical design, thin-film optics, optical testing and interferometry, elem quantum electronics, introductory nonlinear optics, optical components and devices; *options:* coherent light techniques, partial coherence, adv laser physics and optical communications, adv nonlinear optics, detection and noise, physiol optics, adv optical design and aberration theory; electron optics, fibre and integrated optics; computing and lab work (SERC). **Contact The Registrar**
- 82:15 London (UC), Microwaves and modern optics, MSc/Diploma**
- 82:16 Reading, Applied and modern optics, MSc, 1c yr f-t: 2 yrs p-t (hons deg in physics, maths or eng or equiv qual req); course content:** inc geom and theory of image formation, physical theory of image formation, theoretical optics, math topics, computer programming, optical calculations and design inc automatic lens design, optical production methods inc testing of optical elements and systems, optical instruments and optical techniques (fibre optics, optical thin films), visual optics, light sources and detectors, crystal optics (applications of polarisation), lasers and coherent optical techniques (holography and optical data processing), interferometry and its applications, fibre optical communications, industrial laser application, modulators and scanners, display (nonlinear optics and integrated optics); exam and report on sp topic (SERC). **Contact Professor T Evans**

**ASTON UNIVERSITY**  
**VISION SCIENCES**  
**POSTGRADUATE OPPORTUNITIES**

Vision Sciences is essentially a multi-disciplinary  
 research area involving Ophthalmic Opticians

Optometrists  
 Opticists  
 Physicists  
 Psychologists  
 Engineers  
 Biologists  
 Chemists  
 Mathematicians  
 and many others.

Research areas include:

The visual system  
 Spatial and temporal information processing  
 Visual pigments  
 The mathematical representation of differential sensitivity  
 Visual perception and abnormal eye

Visual ergonomics  
 Visual display terminals  
 Visual communication  
 Visual aids  
 Visual impairment  
 Visual ageing  
 Visual adaptation  
 Visual fatigue  
 Visual stress  
 Visual comfort  
 Visual quality  
 Visual performance  
 Visual behaviour  
 Visual psychology  
 Visual physiology  
 Visual anatomy  
 Visual pathology  
 Visual medicine  
 Visual law  
 Visual ethics  
 Visual education  
 Visual training  
 Visual rehabilitation  
 Visual research  
 Visual development  
 Visual evolution  
 Visual speciation  
 Visual extinction  
 Visual conservation  
 Visual management  
 Visual leadership  
 Visual communication  
 Visual marketing  
 Visual sales  
 Visual advertising  
 Visual public relations  
 Visual corporate identity  
 Visual branding  
 Visual design  
 Visual architecture  
 Visual engineering  
 Visual technology  
 Visual innovation  
 Visual entrepreneurship  
 Visual social responsibility  
 Visual sustainability  
 Visual ethics  
 Visual law  
 Visual education  
 Visual training  
 Visual rehabilitation  
 Visual research  
 Visual development  
 Visual evolution  
 Visual speciation  
 Visual extinction  
 Visual conservation  
 Visual management  
 Visual leadership  
 Visual communication  
 Visual marketing  
 Visual sales  
 Visual advertising  
 Visual public relations  
 Visual corporate identity  
 Visual branding  
 Visual design  
 Visual architecture  
 Visual engineering  
 Visual technology  
 Visual innovation  
 Visual entrepreneurship  
 Visual social responsibility  
 Visual sustainability

Requests for further information on research opportunities and enquiries about applying should be directed to the Postgraduate Admissions Tutor at Department of Vision Sciences Aston University Aston Triangle Birmingham B4 7ET Telephone 021-359 3611 ext 5159

**Consult**  
 an  
 institution's  
 official  
 prospectus  
 before  
 applying



## 83 Physical sciences: physics

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 83:1 Aberdeen, Biomedical physics and bioengineering, MSc/PhD**
- 83:2 Aberdeen, Natural philosophy, MSc/PhD;** supervision available, research in progress: *atomic and molecular studies by synchrotron radiation:* photo-ionisation cross-sections, photo-electron and photo-ion spectroscopy; *soft x-rays:* spectrometer design and multilayer mirror optics; *aeronomy:* upper atm temps, winds and emissions by rockets, noctilucent clouds and airglow; *solid state:* x-ray scattering from phonons, modelling of lattice dynamics; *radio astronomy:* flux of extra-galactic variables at 9 mm; *rock magnetism:* rotational and gyro remanent magnetisations, permo-carboniferous Scottish dykes; *instrument design and electronics:* design and construction of instruments for science and industry using mechanical optical, electronic and microelectronic techniques; *theoretical physics:* quantum liqs, electron band calculations, atomic assoc. Contact Professor GV Marr
- 83:3 Aston, Mathematics and physics, MPhil/PhD**
- 83:4 Bath, Physics, MSc/PhD**
- 83:5 Belfast, Applied mathematics and theoretical physics, MSc/PhD**
- 83:6 Belfast, Pure and applied physics, MSc/PhD**
- 83:7 Birmingham, Physics, MSc/PhD**
- 83:8 Bradford, Physics, MPhil/PhD**
- 83:9 Brighton Poly, Applied physics, MPhil/PhD (CNA)**
- 83:10 Bristol, Physics, MSc/PhD**
- 83:11 Bristol Poly, Physics, MPhil/PhD (CNA)**
- 83:12 Brunel, Physics, MPhil/PhD;** research interests in following main areas: particle detector development, laser applications, solid state and surface physics, ultrasonics and non-destructive testing; other interests inc: properties of thin films, solid state and device physics, measurement of transport properties of solids, semiconductor device physics inc fundamental studies of semiconductor controlled rectifiers, lattice defects in crystals, dislocations; crystallography, use of Eddy currents to size and locate defects in ferro-magnetic materials and to investigate growth of cracks, design of multi-freq Eddy current rest eqpt, acoustic emission and optical gauging; investigation of surface and sub-surface properties of materials using ultrasonic, ring laser gyroscope, laser mirror scattering; innovative gamma ray detectors, CCDs for radiation detection and gaseous particle detectors. Contact Professor DC Imne
- 83:13 Cambridge, Applied mathematics and theoretical physics, MSc/PhD**
- 83:14 Cambridge, Physics, MSc/PhD**
- 83:15 City, Electrical engineering and applied physics, MPhil/PhD**
- 83:16 City of London Poly, Physics, MPhil/PhD (CNA)**
- 83:17 Coventry (Lanchester) Poly, Applied physical sciences, MPhil/PhD (CNA)**
- 83:18 Coventry (Lanchester) Poly, Physical science, MPhil/PhD (CNA)**
- 83:19 Cranfield, Ecological physics, MPhil/PhD**
- 83:20 Dundee, Physics, MSc/PhD**
- 83:21 Durham, Applied physics and electronics, MSc/PhD;** supervision available, research interests in solid state physics, electronic materials and devices, microelectronics, digital and high freq electronics; specific projects; Langmuir-Blodgett films and devices, silicon integrated circuit design and devices, photoelectronic properties of II-VI cpds, theory of semiconductor materials and devices, high freq measurements and applications, digital electronics for signal processing and data communications. Contact Dr JS Thorp



properties, specific heat, thermal and electrical conductivity in both crystalline and amorphous metals and alloys, de Haas-van Alphen oscillations, Mossbauer effects; *theoretical physics*: transport theory, magnetism, polymers, liqs, gen solid state physics, math methods, field theory and phase transitions; *polymer physics*: mechanical properties, anisotropic, elastic and visco-elastic, yield and fracture, also nmr, gel permeation chromatography, i-r, laser-Raman and polarised fluor spectroscopy, piezo-electricity. Contact Professor AA Watson

**83:41 Leeds, Radiation**, MPhil/PhD

**83:42 Leicester, Physics**, MSc/MPhil/PhD

**83:43 Leicester Poly, Physics**, MPhil/PhD (CNAAB)

**83:44 Liverpool, Chemical physics**, MSc/PhD

**83:45 Liverpool, Physics**, MSc/PhD; supervision available; research interests in following areas: *exptl* p-g students work in elem particle physics (at CERN in Geneva), nuclear structure physics (structure of nuclei and spectroscopy at Nuclear Structure Facility, Daresbury), solid state and surface physics (photoelectron and auger electron spectroscopy in Department and at Synchrotron Radiation Source, Daresbury), inverse photoemission and low energy electron diffraction (LEED), Mossbauer effect studies on metals, magnetic materials and biol molecules), *theoretical* high-energy particle physics, theories of condensed matter, quantum field theory. Contact Professor CE Johnson

**83:46 Liverpool Poly, Physics**, MPhil/PhD (CNAAB)

**83:47 London (Birkbeck), Physics**, MPhil/PhD

**83:48 London (Imperial), Physics**, MPhil/PhD; supervision available; research in wide range of topics by wide variety of *exptl* and theoretical techniques, some specific topics named: *astrophysics*: optical i-r, x-ray observations using ground-based telescopes and spacecraft; *atm physics and dynamics* numerical modelling of atm motions and oceanography; *biophysics*: enzyme structure; protein eng; muscle; microtubules; biol membranes; anaesthesia; vision; *high energy physics*: electron positron and electron proton expts at CERN and DESY; *optics*: laser development, nonlinear optics, ultrafast phenomena, quantum optics theory, lens design, holographic elements, optical information processing, image processing, see also Physical sciences: optics; *plasma*: expts and theory on laser-plasma interactions, x-ray lasers, dense Z-pinches and JET; *theoretical solid state physics*: theory of surfaces, disordered systems inc localisation, quantum Hall effect and spin glasses; *exptl solid state physics*: semiconductors, disordered systems, magnetic sensing of nerve impulses in the brain; *space physics*: space plasmas and planetary research, eg Jupiter and Uranus; *spectroscopy*: laser synchrotron Fourier transform, plasma and x-ray spectroscopy; *theoretical physics*: theories of elem particles, quantum gravity and their interactions. Contact Registrar

**83:49 London (KQC), Physics**, MPhil/PhD

**83:50 London (Queen Mary), Physics**, MPhil/PhD; supervision available, main fields of research interests: *theoretical physics*: elem particle physics, field theory inc gen relativity, condensed matter physics, stat mechanics; *polymer physics and molecular electronics*: synthesis, characterisation, fundamental physical properties and applications of new org solids, emphasis on diacetylene monomers and polymers in single-crystal form, electro-optic and nonlinear optic org materials; *exptl high-energy and nuclear physics*: collaborative expts in particle physics using accelerators at CERN (Geneva), eg UA1 expt using proton-antiproton collider, studies of low-energy nucleon-antinucleon interactions at LEAR, OPAL expt at LEP; also study of neutrino interactions at ISIS accelerator in UK; *astrophysics*: extra-galactic astronomy, galactic astronomy, planetary astronomy, IRAS follow-up, instrumentation inc instruments for satellite observations; *eng physics*: application of physics to development of measurement techniques for technically-demanding and scientifically-important applications. Contact Dr JA Edgington

**83:51 London (RHBC), Physics**, MPhil/PhD

**83:52 London (UC), Physics**, MPhil/PhD

**83:53 Loughborough, Physics**, MPhil/PhD; supervision available, current research topics inc: *magnetism and solid state physics*: magnetic structure and properties of magnetic alloys, study of magnetic toners for photocopiers, time dependent magnetisation in recording tapes, vac deposited magnetic thin films, solid state physics using precision low temp thermal expansion; *mechanical properties of matter*: musical acoustics, impact properties of metals and composites, mechanical vibration, behaviour of polymers under high strain rate loading, spontaneous and triggered vapour explosions; *optics*: laser damage in solids, laser interactions with liqs, high speed optical diagnostics, ultra-sensitive remote optical sensing, thermal performance of windows, vac deposition of thin films in polymers, reactive planar magnetron sputtering; *surface physics*: applications of surface analysis techniques, laser-induced mass analysis, surface physics of dry processing of III-V semiconductors, ion-induced mixing in SIMS profiling, XPS studies of oxidation of stainless steel.

Contact Head of Department

83 54 Manchester, *Physics*, MSc/PhD

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instruments, inc refractometers and optical transducers remote sensing of planetary surface

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itions Contact Dr DO Hughes

83 63 Nottingham, *Physics*, MPhil/PhD, supervision available for research on nuclear magnetic resonance, medical imaging, molecular tunnelling at low temps, neutron scattering, electron and acoustic magnetic resonance, ferromagnetic and spin wave resonance, deep levels in semiconductors, semiconductor physics, semiconductor devices and 2D structures, optical and far i r spectroscopy, phonon spectroscopy at low temps, thermal conduction in solids, tunnel junction spectroscopy, liq He cosmic ray air showers, muon momentum spectra, Jahn-Teller effects theory

83 64

83 65

83 66 Oxford, *Nuclear physics*, MSc/DPhil

83 67 Oxford, *Physics*, MSc/DPhil See page 354

83 68 Oxford, *Theoretical physics*, MSc/DPhil, supervision available, main fields of research elem particle physics and quantum field theory, nuclear theory, solid state and low temp physics, theoretical astrophysics Contact Professor RJ Elliott

83 69

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83 72 Portsmouth Poly, *Physics*, MPhil/PhD (CNAAB)

83 73 Reading, *Physics*, MPhil/PhD, supervision available, research interests inc solid state physics crystalline semiconductors and insulators metallic alloys, polymers, liqs, glasses and other

phenomena in liqs, liq crystals and macromolecules, *polymer physics* structure property relationships for crystalline and other polymer systems, *theoretical physics* electronic transport theory, optical absorption and electron phonon interactions in semiconductors and insulators, *nuc*

phase transitions (Ising spin glasses), frustration problems, interionic potentials in ionic crystals and their application to defect systems, hopping of defects, impurities in semiconductors, computational physics. Contact Professor T Evans

**83:74 St Andrews, Physics, MSc/PhD**

**83:75 St Andrews, Theoretical physics, MSc/PhD**

**83:76 Salford, Pure and applied physics, MSc/PhD**

**83:77 Sheffield, Physics, MSc/PhD**

**83:78 Sheffield City Poly, Applied physics, MPhil/PhD (CNA)**

**83:79 Southampton, Cryogenics, MPhil/PhD;** supervision available for research in Inst of Cryogenics; recent projects inc: electrical strength and losses in commercial dielectric materials; development and use of trans-sonic cryogenic wind tunnels; mechanical, electrical, thermal and thermodynamic problems of rotating superconducting electrical machines using liq He and other refrigerants in rotating frame; vapour/solid heat transfer and flow in cryogenic liq and vapour columns via laser doppler anemometry; thermodynamic properties of LNG, LPG and hydrocarbon mixtures; 2-phase condensing heat transfer coefficients in heat exchangers for LNG; heat transfer mechanisms in living tissues for application to cryo-surgery; boiling heat transfer at low temp differences; reduction of surface heat fluxes into cryogenic liqs during storage; improvement of multi-layer and foam insulations; surface effects, surface heating and evaporation instabilities in multi-component liqs; heat transfer to He at zero g on Spacelab and Ariane flights; low-temp properties and stabilities of materials inc concrete; cryogenic ballasting of high altitude balloons; high gradient magnetic separation using superconducting magnets. Contact Professor RG Scurlock

**83:80 Southampton, Physics, MPhil/PhD;** supervision available; research interests inc: *Laser physics spectroscopy and nonlinear optics:* lasers and nonlinear optical phenomena, and their exploitation in spectroscopy and development of new devices; *computational physics:* applications of parallel processing with transputer arrays; *exptl elem particle physics:* properties of new psi particles at CERN 300 GeV SPS accelerator; *theoretical particle physics:* application of 'gauge theories' and study of symmetries and their breaking; *x-ray and gamma ray astronomy:* studies of high energy astrophysical sources inc use of imaging telescopes; *upper-atm physics:* EISCAT radar low light level cameras; *magnetism:* fundamental magnetic properties of rare-earth and transition metal alloys, amorphous materials, neutron-scattering; *solid state theory:* many body theory and theory of disorder systems; *biophysics:* structure and function of biol membranes; *surface physics:* physical and chem structure of solid surfaces; *atomic collision physics:* electron energy-loss spectroscopy of metal vapours. Contact CA Ryde

**83:81 South Bank Poly, Physics, MSc/MPhil/PhD (CNA)**

**83:82 Stirling, Physics, MSc/PhD**

**83:83 Strathclyde, Applied physics, MSc/PhD** See page 354

**83:84 Strathclyde, Physics, MSc/PhD** See page 354

**83:85 Sunderland Poly, Physical sciences, MPhil/PhD (CNA)**

**83:86 Surrey, Physics, MPhil/PhD** See page 355

**83:87 Sussex, Physics, MPhil/PhD;** supervision available; wide range of research interests in following broad fields: *theoretical:* particle physics and cosmology, nuclear physics, physics of condensed matter; *exptl:* low-temp studies of solids and helium, interactions of ion beams with solids and gases, epitaxial growth in semiconductors, atomic physics, space and lab plasma physics, nuclear spectroscopy, neutron physics. Contact Dr MG Richards

**83:88 Thames Poly, Materials science and physics, MPhil/PhD (CNA)**

**83:89 Trent Poly, Physical sciences, MPhil/PhD (CNA)**

**83:90 Ulster, Physics, MPhil/DPhil**

**83:91 Wales (Aberystwyth), Physics, MSc/PhD**

**83:92 Wales (Bangor), Physics, MSc/PhD**

**83:93 Wales (Cardiff), Physics, MSc/PhD;** supervision available for research; exptl research programme: inc physical properties of solids esp molecular motions and phase transitions studied by x-ray and neutron diffraction, laser-Raman spectroscopy, ultrasonics, optical birefringence etc; optical diffraction (eg interpretation of diffraction patterns of fibres and other disordered structures through laser diffractometer techniques); electrical and dielectric properties of materials; studies of semiconductor surfaces and interfaces with metals; growth of novel materials and electronic device structures by molecular beam epitaxy; physics of musical instruments; electronic sound; thermal insulation, development of novel materials using metallised surfaces; *theoretical programme:* links broadly with above research currently inc rotational lattice dynamics; calcula-

- studies of electronic structure of defects in metals and semiconductors and of surface and in states in semiconductors Contact Professor RH Williams
- 83 94 Wales (Swansea), Physics, MSc/PhD
- 83 95 Warwick, Physics, MSc/MPhil/PhD
- 83 96 Wolverhampton Poly, Materials and physics MPhil PhD (CNA 3)
- 83 97 Worcester CHE, Physical sciences, MPhil PhD (CNA 3)
- 83 98 York, Physics, MPhil/DPhil, supervision available research in following major areas: solid physics, theoretical physics laser physics geophysics specific staff interests in crystal structure determination by direct methods origin of planetary systems planetary science star formation low energy electron diffraction Auger electron spectroscopy scanning Auger electron microscopy, surface structure analysis optical properties of thin films applications of laser studies of glass, Auger effect surface physics electronic properties of solids and surfaces surface physics low energy electron diffraction laser interferometry detection of electromagnetic waves magneto and electro optic transducers studies of laser amplitude and phase in vacuum physics, geomagnetic pulsations earth conductivities from electromagnetic induction studies of lithospheric metallic films corrosion and conservation of glass x ray fluorescence spectroscopy of glasses or silicate systems archaeometry charge transport in molecular solids laser Raman spectroscopy or processes, high resolution Doppler free laser spectroscopy holographic optical elements diffraction gratings Contact Professor MM Williams

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. Research projects (normally lasting three months) with submission of a written report. Dissertation or thesis on results of a part of these courses

- 83 99 Aberdeen, Medical physics, MSc Diploma
- 83 100 Aberdeen, Natural philosophy MSc 1c yr 1 (1st honours degree in physics or maths req) intensive study of particular branch of theoretical or applied physics may be combined with training in practical investigation, course content choice of topics from following areas: quantum statistical mechanics with techniques of physics theory of quantum gases solid state physics radio astronomy detection of geophysics molecular physics vacuum ultraviolet x ray instrumentation Contact Professor G V Mather
- 3 101 Belfast, Atomic and molecular processes MSc
- 3 102 Birmingham, Applied radiation physics MSc
- 3 103 Birmingham, Physics and technology of nuclear reactors MSc
- 3 104 Brunel, Semiconductor physics and technology MSc Diploma 1 yr 1 (1st honours degree in physics or electrical eng req) involves advanced study in field for research work on semiconductors or for technological work in solid state electronics industry syllabus structure and classification of solids preparation of materials energy bands in solids generation and motion of free charge carriers magnetic properties applications of semiconductors technological applications particularly solar cells thin film transistors logic and memory devices glasses and vitreous state (SLRC) Contact Professor WE Spear Department of Physics
- 3 105 Cambridge, Physics, MPhil
- 3 106 Dundee, Physics and technology of amorphous solids, MSc 1 yr 1 (1st honours degree in physics electrical eng or materials science req) offered jointly with Edinburgh and Glasgow fundamental and latest applied developments in amorphous semiconductor field course structure Oct March course work at Dundee April Sept research project at 1 of participating univs topics structure properties of doped and undoped amorphous semiconductors amorphous silicon junction devices solar cells thin film transistors logic and memory devices glasses and vitreous state (SLRC) Contact Professor WE Spear Department of Physics
- 3 107 East Anglia, Chemical physics, MSc
- 3 108 Edinburgh, Physics and technology of amorphous solids, MSc
- 3 109 Glasgow, Physics and technology of amorphous solids, MSc
- 3 110 Heriot Watt, Opto-electronic and laser devices MSc
- 3 111 Heriot Watt, Mathematics applied to physical sciences MSc
- 3 112 Lancaster, Applied cryophysics, MSc
- 3 113 Lancaster, Physics and education, MA
- 3 114 Leeds, Medical physics, MSc

- 87:230 La Sainte Union CHE (Southampton), *Computing for teachers*, Certificate (Portsmouth Poly)
- 87:231 Leeds, *Computers in education*, Diploma
- 87:232 Leicester Poly, *Computing*, Diploma
- 87:233 London (Birkbeck), *Computer science*, Diploma
- 87:234 London (Goldsmiths'), *Microcomputers in education*, Diploma
- 87:235 London (Inst Ed), *Microcomputers in education*, Diploma
- 87:236 Mid-Kent CH & FE, *Computer education*, Certificate/Advanced Certificate
- 87:237 Napier C (Edinburgh), *Information technology (computer aided engineering)*, Diploma
- 87:238 Napier C (Edinburgh), *Systems analysis and design*, Diploma, 1 yr f-t (dep req, or approved qual plus relevant experience), preparation for career in commercial or admin data processing and subsequently in senior post in computer management, synopsis compiler hardware and software, operating systems, information systems analysis, design business systems (management, accounting, OR), system design project, programming project Contact Information Office, Napier College, Freeport, Edinburgh EH14 0PA
- 87:239 New C (Durham), *Computing in the curriculum*, Diploma (Durham)
- 87:240 Newcastle Poly, *Business information technology*, Diploma (CNA A)
- 87:241 N Cheshire C, *Computer education*, Diploma
- 87:242 Nottingham, *Mathematics*, Diploma
- 87:243 Paisley CT, *Information technology*, Diploma
- 87:244 Poly of Central London, *Computing*, Certificate
- 87:245 Poly of Central London, *Electronics and computer technology*, Diploma
- 87:246 Poly of North London, *Computing*, Diploma
- 87:247 Poly of Wales, *Computer science*, Diploma
- 87:248 Portsmouth Poly, *Information systems*, Diploma (CNA A)
- 87:249 Robert Gordon's IT (Aberdeen), *Computer technology*, Diploma (CNA A)
- 87:250 Robert Gordon's IT (Aberdeen), *Information systems technology*, Diploma (CNA A)
- 87:251 Southampton IHE, *Operational research and computer techniques*, Diploma
- 87:252 Stirling, *Computer education*, Diploma
- 87:253 Stirling, *Computer science*, Diploma
- 87:254 Strathclyde, *Business information technology systems*, Diploma
- 87:255 Ulster, *Microelectronics and microcomputer applications*, Diploma
- 87:256 Wales (Aberystwyth), *Computer science*, Diploma See page 377
- 87:257 West Glamorgan IHE (Swansea), *Professional studies in education (computer science)*, Diploma (CNA A)

## Computing science

## UNIVERSITY OF GLASGOW

Degree MAppSci

Length of course 12 months full time or 24 months part time

Number of places 10

**Description of course** The Master of Applied Science is an advanced course offering the opportunity for in-depth study in selected areas of Computing Science. Students follow a minimum of three courses from a range including Compilers, Computer Systems, Computer Hardware, Computer Graphics and Interaction, Theory of

Computing, Database Systems, Knowledge Base Systems and Numerical Methods, and in addition complete a dissertation on an advanced topic. Part-time study requires attendance for a minimum of one and a half days per week during term.

**Entrance requirements** Good honours degree with Computing Science as a major component, or equivalent.

**Grant** None available

**Head of Department** Professor D C Gilles  
**Applications and enquiries** Postgraduate Admissions Tutor, Computing Science Department, University of Glasgow, 17 Lilybank Gardens, Glasgow G12 8RZ  
 Telephone 041-339 8855 ext 4256

## University College of Wales, Aberystwyth

### Postgraduate Computer Science

The Computer Science department offers courses in Computer Science leading to the degrees of MSc and PhD.

The department is well equipped to provide teaching and opportunities for research.

#### MSc/Diploma in Computer Science

This is for able graduates from other disciplines who would like to convert to Computer Science. A Diploma can be awarded after the ten-month taught course, and the more successful students can proceed to a substantial project which is submitted for an MSc.

#### MSc and PhD by Research in Computer Science

There are two main research groups in the department, in Software Engineering, and in Artificial Intelligence and Robotics. Each group has substantial outside funding, and works closely with industry.

For further information write to:  
Postgraduate Admissions Tutor  
Department of Computer Science  
University College of Wales  
Aberystwyth  
Dyfed, Wales SY23 3BZ

## THE CITY UNIVERSITY

### MSc/Diploma Programme in INFORMATION ENGINEERING

A one-year course with major specialisations in:

**CONTROL ENGINEERING  
MEASUREMENT AND  
INSTRUMENTATION  
ELECTRONIC DIGITAL SYSTEMS  
ROBOTICS SENSING AND CONTROL  
MEASUREMENT AND  
INFORMATION IN MEDICINE**

Students sponsored by industry may attend part time over two years.

Further information and application forms are available from:

Senior Tutor (MSc course)  
School of Electrical Engineering and  
Applied Physics  
The City University  
Northampton Square  
London EC1N 0HB  
Telephone 01 253 4399 ext 3825

## Department of COMPUTING at the University of Lancaster



### POSTGRADUATE RESEARCH

Well qualified graduates in Computer Science can undertake research (leading to a PhD) in most branches of the discipline. Currently areas of active research are:

Distributed Computer Systems and Programming

More detailed information is available from:  
The Research Admissions Officer, Department of Computing  
University of Lancaster, Engineering Building  
Bailrigg, Lancaster LA1 4YH



## Loughborough University of Technology

### DEPARTMENT OF COMPUTER STUDIES Department Head Professor E A Edmonds

### MSc in INTERACTIVE COMPUTING SYSTEM DESIGN

This one year full time course takes honours graduates with a computer science background into the creative

design of interactive computing systems.

Communication.

Part 1B topics include Interactive Computing, Advanced IT Tools and Interactive Workstations.

Course projects are undertaken in industry and the Department's AI and Electronic Media Laboratories.

Enquiries to:

The Postgraduate Admissions Tutor  
Department of Computer Studies  
Loughborough University of Technology  
Loughborough Leicestershire LE11 3TP



# Addresses of institutions

are on pages  
479–508

University of  
Newcastle upon Tyne

## POSTGRADUATE COMPUTING SCIENCE



The Computing Laboratory offers courses in Computing Science leading to the degrees of MSc and PhD. The department is well equipped to provide teaching and opportunities for research in most aspects of hardware and software development.

### MSc in Computing Science

A broadly based introduction to the discipline, intended for graduates with little or no previous computing experience.

### MSc in Computing Software and Systems Design

This course specialises in the design and construction of large-scale computing systems. A first degree in Computing Science is normally required.

### MSc or PhD by Research in Computing Science

Well qualified graduates in Computing Science can undertake research in most branches of the discipline.

SERC studentships for each of the above are available to well qualified applicants. For further information write to

Postgraduate Admission Tutor, Dept SG  
Computing Laboratory,  
The University,  
Newcastle upon Tyne  
NE1 7RU

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section

- 88 1 Aberdeen, Engineering MSc/PhD** research supervision available in aspects of structural analysis and design structural dynamics impact mechanics energy absorption fracture mechanics mechanics of compressible and incompressible fluids 2 phase flow problems heat and mass transfer non linear vibration earthquake response machine dynamics geotechnical engineering soil dynamics dynamics of gearing and mechanical power transmission shaft whirl and vibration control theory electrical machines and systems inc control of machines machine condition monitoring turbo-generator torsional oscillations real time simulation optoelectronics laser holography semiconductors and graphics knowledge representation using massively parallel processors adv architecture local area networks methodologies for design of digital systems high level applications support for digital systems control protocols for packet radio and satellite communication systems Contact Dr AA Rodger

- 88 2 Bath, Engineering MSc/PhD** supervision available current research interests helicopter rotor aerodynamics slotted flaps dynamic behaviour of deep towed body cable systems unsteady aerodynamics of control surfaces dynamics of prime mover load systems design of mechanisms vibrations stretcher suspensions control characteristics of split power transmission systems CAD of hydraulic systems contamination of hydraulic systems fatigue life of structures thin walled structures dynamic loading of vehicles adv turbochargers combustion in high swirl chambers for DI diesel engines thermal barrier pistons flow in variable geom radial turbines Stirling engines heat transfer, gas exchange processes of highly turbocharged diesel engines flexible manufacturing systems computers applied to forging flexible fixtures polishing robot geom modelling of blended surfaces non-contact co-ordinate measuring machine automation of aspects of pattern making Contact J Scowley

- 8 3 Belfast, Engineering mathematics, MSc/PhD**

- 8 4 Bristol, Engineering mathematics MPhil/PhD** See page 384

- 8 5 Bristol Poly, Engineering MPhil/PhD (CNA)**

- 8 6 Brunel, Engineering MSc/PhD** See page 384  
communication systems control systems intelligent automata CAD psychol modelling pattern recognition and industrial robotics associative processing and VLSI architecture audiology biomedical eng lubrication marine eng solar energy stress analysis and material behaviour n mechanics vibrations control n power eng production processes deep hole drilling profile boring N/C machining building services building psychol building materials construction management open-channel flow, building ventilation computer modelling foundations and geotechnics road safety studies metal alloys research thermoplastics development wear of polymers and composites joining and durability of materials new welding processes wear of Faculty Officer

- Cambridge, Engineering MSc/PhD**

- Central SA & D (London), Industrial design engineering, MPhil/PhD (CNA)**

- Coventry (Lanchester) Poly, Combined engineering MPhil/PhD (CNA)**

- Derby, Fluid engineering, MSc/PhD** See page 384

- Exeter, Engineering, MPhil/PhD (CNA)**

- Leeds, Engineering science, MSc/PhD**

- Leeds, Engineering science, MPhil/PhD** research undertaken in microfluidics, microelectronics, computer architecture, computer control of electrical and mechanical systems, structural analysis, design of pipe networks, estuary modelling

- Leeds, Engineering science, MPhil/PhD** research undertaken in microfluidics, microelectronics, computer architecture, computer control of electrical and mechanical systems, structural analysis, design of pipe networks, estuary modelling

- Leeds, Engineering science, MPhil/PhD** research undertaken in microfluidics, microelectronics, computer architecture, computer control of electrical and mechanical systems, structural analysis, design of pipe networks, estuary modelling

- Leeds, Engineering science, MPhil/PhD** research undertaken in microfluidics, microelectronics, computer architecture, computer control of electrical and mechanical systems, structural analysis, design of pipe networks, estuary modelling

methods; optical methods for structural inspection; geotechnical eng; design and development of replacement hip-joints; use of hardness, friction, wear and crack growth measurements to evaluate fundamental and technological properties of new commercial ceramic and metallic alloys; electrical charge transport in org materials; thermodynamics and gas dynamics of lean-burn automotive engines; acoustic and aerodynamic characteristics of waste-gas flares; flow over compliant surfaces. Contact Dr PW Carpenter

- 88:14 **Hatfield Poly, Engineering**, MPhil/PhD (CNA)
- 88:15 **Hull, Engineering design and manufacture**, MSc/PhD
- 88:16 **Lancaster, Engineering**, MPhil/PhD
- 88:17 **Leicester, General engineering**, MPhil/PhD
- 88:18 **Loughborough, Engineering mathematics**, MSc/MTech/PhD
- 88:19 **Manchester Poly, Mechanical, production and chemical engineering**, MPhil/PhD (CNA)
- 88:20 **Napier C (Edinburgh), Technology**, MPhil/PhD (CNA)
- 88:21 **Newcastle, Engineering mathematics**, MSc/PhD
- 88:22 **Nottingham, Theoretical mechanics**, MPhil/PhD
- 88:23 **Open, Energy studies**, BPhil/MPhil/PhD
- 88:24 **Open, Engineering science**, BPhil/MPhil/PhD
- 88:25 **Oxford, Engineering science**, MSc/DPhil; facilities available for wide range of research; main research areas. fl mechanics, heat transfer and thermodynamics, cryogenic eng (production of refrigeration, heat transfer and fl flow, cryopump design, new cements, superconducting materials), medical eng (blood handling devices, orthopaedics), solid mechanics (structures, mechanics of fatigue, flaws and fracture, mechanical behaviour of metals, polymers and reinforced plastics at impact rates of loading, mechanical behaviour of polymeric solids), soil mechanics (soft soils, gassy soils, reinforced soil, pipe-jacking, in-situ testing, geophysics), plasma physics and ionisation phenomena, physical electronics (scanning optical microscope and fibre optics, volume holography, acousto-electronics and signal processing, microfocused ion beams, exploration seismology), control and system dynamics (theory, applications and implementation), robotics (image processing, image understanding, mobile robots), see separate entries in approp chs for details. Contact Professor CP Wroth
- 88:26 **Oxford Poly, Engineering**, MPhil/PhD (CNA)
- 88:27 **Poly of Central London, Engineering**, MPhil/PhD (CNA)
- 88:28 **Reading, Engineering**, MPhil/PhD
- 88:29 **Royal CA, Automotive design**, MA/PhD
- 88:30 **Southampton, Sound and vibration studies**, MPhil/PhD
- 88:31 **Wales (Swansea), Energy studies**, MSc/PhD
- 88:32 **Warwick, Engineering science**, MSc/PhD

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

- 88:33 **Aston, Computer aided design**, MSc
- 88:34 **Belfast, Engineering computation**, MSc/Diploma
- 88:35 **Birmingham Poly, Industrial design**, MA/Diploma (CNA)
- 88:36 **Central SA & D (London), Industrial design engineering**, MA (CNA)
- 88:37 **Cranfield, CAD and CAM of production machines and systems**, MSc, 1 yr f-t; syllabus: computer aided analysis, software eng, product modeling, manufacturing systems eng, microprocessors in machine systems, simulation techniques, robotic control and applications, database design, artificial intelligence, CAD/CAM communications, management of product innovation, individual/ industrial CAD/CAM project (SERC, TOPS, EITB approved). Contact John Corbett
- 88:38 **Cranfield, Design of flow systems**, MSc
- 88:39 **Cranfield, Engineering construction project management**, MSc
- 88:40 **Cranfield, Fluid engineering**, MEng
- 88:41 **Cranfield, Industrial robotics**, MSc
- 88:42 **Cranfield, Metrology and quality assurance**, MSc
- 88:43 **Cranfield, Software techniques in computer aided engineering**, MSc

- 88 44 **Durham, *Engineering***, MEng 13 mths f t, course in adv eng and management studies in col-  
laboration with sponsoring industrial organisation, project periods in industry adv study in

analysis finite element methods digital systems LSI circuits and systems ic design techniques  
electronic materials technology electronic processes in device semiconductors microprocessor  
systems LSI in communications dynamics and stress analysis radial and mixed flow turbomachin-  
ery mechanical eng design instrumentation *also management studies programme* management  
accounting finance marketing business and econ environment quantitative methods produc-  
tion management industrial relations labour law individual and organisational behaviour (EITB  
microelectronics and turbomachinery options SERC) Contact Dr Rk Taylor

- 88 45 **East Anglia, *Theoretical mechanics***, MSc  
88 46 **Glasgow, *Engineering management***, MSc  
88 47 **Heriot Watt, *Computer aided engineering*** MEng  
88 48 **Lancaster, *Project engineering*** MSc  
88 49 **Leicester Poly, *Industrial design (engineering)*** MA (CNAAB)  
88 50 **L. ...**  
88 51 **...**

design improve knowledge and competence in manufacturing technology and materials science

- 88 52 **London (Imperial), *Industrial robotics and manufacturing automation*** MSc/Dip  
88 53 **Loughborough, *Engineering design*** MTech/ALUT 1c yr f t 2c yrs p-t (deg in mechanical  
electrical or production eng or equiv qual req) comprehensive and professional approach to design  
of products processes and systems prepares engineers for positions of responsibility in industry

- 88 54 **...**  
88 55 **Newcastle, *Engineering mathematics***, MSc  
88 56 **...**  
88 57 **...**  
88 58 **...**  
88 59 **...**  
88 60 **Royal CA, *Industrial design*** MA  
88 61 **Royal CA, *Industrial design engineering***, MDes/Diploma  
88 62 **Southampton, *Sound and vibration studies*** MSc/Diploma  
88 63 **...**  
88 64 **...**

- 88 65 **Teesside Poly, *Computer aided engineering*** MSc/Diploma (CNAAB)

## Certificates and diplomas

88:66 Bristol Poly, *Engineering*, Diploma

88:67 Coventry (Lanchester) Poly, *Computer aided engineering*, Diploma (CNA)

88:68 East Anglia, *Theoretical mechanics*, Diploma

88:69 Paisley CT, *Engineering design of buildings*, Diploma

### Energy engineering: the optimisation, utilisation and management of energy

### UNIVERSITY OF SURREY

Degree MSc/Diploma

Length of course 1 year full-time, 2 years part-time

No of places 15

**Description of course** The full-time course extends over one calendar year beginning in October. For the part-time course, attendance is required on one day each week for two years and a project is undertaken in conjunction with the student's employment. Topics covered include: introduction to energy management, economics and management studies, energy utilisation I and II, systems engineering, energy conversion and prime movers, energy conversion and distribution and energy schemes. Laboratory work, seminars, a project and examinations form an integral part of the course.

**Entrance requirements** Applications are invited from graduates in any branch of engineering or applied sciences who have industrial experience and from chartered engineers.

Grant Science and Engineering Research Council Manpower Services Commission (TOPS), British Council. Government departments, trusts and employers interested in encouraging graduates to attend this course are also invited to make enquiries. Course director A W E Henham.

**Application and enquiries** A W E Henham, Course Director, Energy Engineering, University of Surrey, Guildford GU2 5XH. Telephone 0483 571281 ext 2382/2358. Telex 859331.

## ASTON UNIVERSITY

### RESEARCH OPPORTUNITIES IN THE FACULTY OF ENGINEERING

Opportunities exist for research leading to MPhil/PhD in a wide range of areas for candidates with a good honours degree in a relevant scientific or engineering discipline

### RESEARCH STUDENTSHIPS

Financial support through research studentships is available in many cases

### DEPARTMENTAL RESEARCH

#### Chemical Engineering

Distillation, liquid-liquid extraction, spray-drying, biochemicals separation using chromatography and membranes, energy technology and heat transfer, enzyme and thermochemical process, applied computation and risk assessment studies

#### Civil Engineering

Construction management, remote sensing, water resources, transportation systems, cement and concrete, durability of porous materials, fire protection, metal corrosion, micromechanics of particulate materials

#### Electrical & Electronic Engineering and Applied Physics

Digital signal processing and communications systems for video, data and speech, programmable electronic systems, microprocessor and transputer applications, software engineering and concurrent processing, power utilisation and electroheat

#### Mechanical Engineering

Variety of topics in CAD, mechanics, thermo fluids, mechanics of metal forming, control of machinery

#### Materials Engineering

Powder metallurgy, fracture, fatigue, metal-matrix composites, ion plating/implantation, plasma nitriding, archaeometallurgy, zinc alloy development

#### Production Engineering

CAE applied to development of advanced manufacturing systems and techniques incorporating FMS and FAS, applications of robots, DNC

### MSc/DIPLOMA COURSES

Telecommunications

MSc 12 months FT Diploma 6 months FT

Computer Aided Design

MSc 12 months FT 30 months PT

For further information write to the Secretary of the Faculty of Engineering, Aston University, Aston Triangle, Birmingham B4 7ET

# Heriot-Watt University

## Faculty of Engineering



## POSTGRADUATE COURSES AND RESEARCH 1987/8

The Faculty offers a wide range of postgraduate courses and opportunities for research. A Guide to Postgraduate Study and Research giving details of these is available from the Deputy Registrar Heriot-Watt University Chambers Street Edinburgh EH1 1HX

### Masters courses currently available

Acoustics Vibration and Noise Control  
Building Services Engineering  
Construction Management (Building)  
Design and Manufacture  
Hydraulic Engineering  
Soil Mechanics  
Structural Engineering  
Highway Engineering  
Digital Techniques  
Electrical Power Engineering  
Information Technology (Conversion Course)  
Petroleum Engineering  
Modular Course (combined faculty course)

P/T •  
PT F/T •  
P/T F/T •  
P/T •  
P/T  
P/T  
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P/T F/T •  
P/T F/T •  
F/T •  
F/T •  
P/T F/T •

\* Postgraduate diploma course also available F/T Full time P/T Part time

### Research activities

The departments, together with the research activities for which supervision is available for research are listed below

**Building** Building technology heating ventilation and thermal insulation construction management building economics wind effects on buildings acoustics and sound transfer building maintenance building services engineering

**Chemical and Process Engineering** Offshore processing high temperature processing powder production marine technology dynamic wetting and adhesion enhanced oil recovery continuous processing process control effluent and pollution control operation grain drying

**Civil Engineering** Materials mathematical/physical modelling of structures and soils full scale testing member/soil characteristics dynamics of compliant floating systems in short crested seas estuarine dynamics pavement engineering engineering education

**Electrical and Electronic Engineering** Advanced robotics multi-sensor perception

systems real time intelligent control systems image analysis autonomous submarines and sub-sea robotics digital communications computer architectures microwave engineering electrical power systems power electronics

**Mechanical Engineering** Two-phase flow flow in porous media rotor dynamics dynamic response to mannequins attached to floating vessels vapour power cycles boiling heat transfer heat pumps natural circulation of ducts computer-aided engineering

**Offshore Engineering** Single point mooring dynamics of compliant structures moorings separated flow round bluff bodies wind-wave interaction laser-doppler techniques waves and current loading on cylinders environmental matters

**Petroleum Engineering** Reservoir rock characterisation reservoir and well damage studies enhanced oil-recovery multiphase flow of hydrocarbon systems techno-economic study of offshore production systems electrical properties of rocks design of completion systems for deviated wells

# THE UNIVERSITY OF BATH

## SCHOOL OF ENGINEERING

### Postgraduate Research Opportunities

A wide range of research is offered leading to the degrees of MSc and PhD for students with a good honours degree. Financial support through research studentships is available in many cases.

**Aeronautical engineering:** helicopter rotor aerodynamics, slotted flaps, deep towed cable systems.

**Applied mechanics:** design of mechanisms, vibrations.

**Fluid systems and control:** control of split power transmission system, CAD of hydraulic systems, contamination in high pressure hydraulic systems.

**Materials and structures:** fatigue life of structures, safety in aircraft structures, reinforced plastic structures, thin-walled structures.

**Thermal power:** turbocharging, combustion in high swirl chambers for DI Diesel engines, thermal barrier piston, gas exchange processes of Diesel engines, Stirling engines, heat transfer.

**Manufacturing:** flexible manufacturing systems, computers applied to forging, flexible fixtures, polishing robot, geometric modelling of blended surfaces, non contact coordinate measuring machine, automation of aspects of pattern making.

**MSc by coursework in Diesel engine technology.** This one-year course leads to an understanding of the essential aspects of Diesel engine technology and introduces the graduate engineer to the fundamental concepts underlying the design and performance assessment of engines and their ancillary equipment.

**MSc courses in fluid power technology and fluid power system design.** Both of these one-year courses involve modular lectures together with work on simulation techniques. In the technology course stress is put on project and development whilst in the system course the stress is on design.

*For further information write to:* The Director of Postgraduate Studies,  
School of Engineering, University of Bath, Bath BA2 7AY

## UNIVERSITY OF BRISTOL

### DEPARTMENT OF ENGINEERING MATHEMATICS

Supervised research projects leading to an MSc/ PhD in multidisciplinary fields in an engineering context are offered in the following fields:

**Mathematical Modelling of Continuous Systems**

- Finite element model verification
- Heat generation in high speed grinding
- Optimal control of tidal power schemes
- Electrothermal convection and non-linear stability

**Information Technology**

- Intelligent knowledge based systems
- Design of expert systems and applications
- Vision understanding
- Man-machine interfaces
- Logic programming
- Theories of uncertainty

Further information from: **Dr A T Richardson,**  
Department of Engineering Mathematics,  
University of Bristol, Queen's Building, University  
Walk, Bristol BS8 1TR. Telephone Bristol (0272)  
303250.

# Cranfield

## POSTGRADUATE WORK ON FLUID FLOW

**MSc/PhD** Industrially linked research projects in areas such as advanced flowmeter design, fluid instrumentation, multiphase and two-component flows, computational fluid mechanics.

**Total Technology PhD** Research project undertaken at place of work with supervision from industrial, academic and management experts. Thesis covers technical work and interdisciplinary aspects such as management, production and marketing.

**MEng** Modular Includes short course attendance and work on research or design project. May be undertaken on part-time basis while in employment.

**Further information:** Dr Vivien Morris, Department of Fluid Engineering & Instrumentation, Cranfield Institute of Technology, Cranfield, Bedford MK43 0AL.

# Brunel

THE UNIVERSITY OF WEST LONDON

## Postgraduate Opportunities in the Faculty of Technology

The Faculty of Technology offers the following specialist MSc courses

Advanced Manufacturing Systems  
Building Services Engineering  
Construction Management  
Digital Systems  
Intelligent Systems

Microelectronics Systems Design  
Project Management (jointly with  
Henley, the Management College)  
Welding and Adhesive Bonding of  
Engineering Materials

Excellent facilities and structured programmes for research training in over forty  
Specialist Groups some of them multi disciplinary are available

Further information may be obtained from Faculty of Technology Brunel University  
Uxbridge, Middlesex UB8 3PH (quote Ref SG 87)

## UNIVERSITY OF CAMBRIDGE

### Department of Engineering

The Department is a general one teaching and researching in most areas of engineering

#### Current fields of RESEARCH are

High and low speed aerodynamics turbomachinery (experimental numerical and analytical) fluid mechanics inc 2-phase flows sediment transport and wave loading fission and fusion reactor technology heat transfer combustion and ic engines Stirling cycle engines MHD inc applications in metallurgy generation and control of sound, relation of sound to turbulence and combustion, high-power lasers electron optical instruments and electron beam machines, electron emission and surface physics, microwave electronics inc solid state and thin film devices superconducting devices at power freqs signal processing systems digital transmission systems small electrical machines control systems, control and design of industrial processes microprocessor applications tribology metal forming impact eng machine tools mechanisms vibrations and dynamics, solid mechanics thermal stresses, textile processing mechanics satellite dynamics and surveying CAD and CAM robotics bioeng soil mechanics inc centrifugal testing offshore foundations, buried pipes and tunnels steel concrete and composite structures, shells and plates welding residual stress stability of structures materials science metallic and non-metallic materials

#### One year courses leading to the Phil are offered in

Computer Speech and Language Processing  
Soil Mechanics

Further details about the Department and application forms may be obtained from the  
Secretary of the Faculty Board University Department of Engineering Cambridge CB2 1P



# UNIVERSITY OF EDINBURGH

## School of Engineering

### Research Opportunities

Opportunities exist for research leading to MPhil/PhD in a wide range of areas for candidates with a good honours degree in a relevant subject. Financial support through research studentships is available in many cases.

### Research areas:

**Chemical Engineering** Catalysis and reactor design, fluidisation and behaviour of particulate systems, CAD, computer and AI applications, energy economy and recovery of low grade heat, heat transfer, mechanics of biological fluids

**Civil Engineering & Building Science** Full-scale structural testing, non-destructive testing, CAD, hydraulics, soil mechanics, public health, timber structures, wind effect on buildings and structures, combined bending and torsion on concrete elements, structural masonry and aspects of fire safety engineering

**Electrical Engineering** Integrated circuit design, signal processing, amorphous semiconductors, speech processing, IC fabrication, chemical sensors, gallium arsenide design, crystal growth

**Mechanical Engineering** Robotics, CAD/CAM, advanced manufacturing techniques, undersea machining, wave energy, nuclear engineering, transport for the disabled, structural vibration, gas dynamics

### MSc/Diploma courses

#### MSc in Building Engineering (Structures)

The course will offer advanced instruction in aspects of building engineering relating to fabric and structure

#### MSc in Information Technology: Design and Manufacture of Microelectronic Systems (Electrical Engineering)

This course covers all aspects of IC design, fabrication and test. The department is the site for the major SERC IC processing service facility for all British universities and this, together with full IC CAD, is available to students

In October 1987 a new set of modules will be offered which will allow the interested student to work in the field of signal processing, rather than integrated circuit design. This new 'flavour' of MSc will have the same title as given above and will run concurrently with the original course. Both the original and the new course are run in collaboration with the departments of Computer Science and Artificial Intelligence

#### MSc in Advanced Production Engineering (Mechanical Engineering)

The course covers the areas of robotics, applications of artificial intelligence, CAD/CAM, advanced manufacturing techniques and clean air technology

These MSc courses are of one year duration full-time but the Information Technology and Building Engineering degrees are also available as part-time courses of two or three years' duration

For further information Faculty of Science, University of Edinburgh, Kings Buildings, Mayfield Road, Edinburgh EH9 3JL quoting Ref No CRAC 87 and the degree and department in which you are interested

## Cranfield

### Postgraduate Courses in COMPUTER-AIDED ENGINEERING and in APPLICABLE MATHEMATICS

Together the courses offer a wide range of opportunities for the application of mathematics and computing to practical problems in information technology.

Some part-time students may be accepted.

Financial support is given by SERC and by MSC (TOPS).

For further details write to:  
**Admissions Tutor, DACAM,  
FREEPOST, Cranfield Institute of  
Technology,  
Cranfield, BEDFORD MK43 7BR.**

## Index by subject headings

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## ENGINEERING FACULTY

# University College London

The Faculty of Engineering offers opportunities for MPhil/PhD research degrees and one year taught-course MSc and College Diplomas in the following departments

**Chemical and Biochemical Engineering**  
MSc and Diploma courses in Biochemical  
Engineering, Polymer Science and Technology

**Civil Engineering**  
Intercollegiate MSc courses in Transport and  
Structural Engineering

**Photogrammetry and Surveying**  
MSc and Diploma courses in Photogrammetry in  
Surveying and in Numerical Methods in  
Photogrammetry and Surveying. Research  
opportunities in Ground and Air Survey Methods and  
Instrumentation. Close Range Photogrammetry  
Industrial Surveying and Metrology

**Electronic and Electrical Engineering**  
MSc and Diploma courses in Electronic and  
Electrical Engineering

**Mechanical Engineering and Naval Architecture**  
MSc and Diploma courses in Marine Engineering,  
Ocean Engineering, Naval Architecture and  
Non-destructive Evaluation. Research opportunities  
in Automatic Control, Bioengineering, Fluid  
Mechanics, Thermodynamics, Materials, Naval  
Architecture, Offshore Structures and Impact

## Cryogenics

## SOUTHAMPTON UNIVERSITY

### Degree MSc/PhD

**Length of course** 1 year full time (MSc), 3 years full-time (PhD), part time by arrangement.

**Description of course** The Institute of Cryogenics at Southampton covers all training and research fields in the application of low temperatures below about 250 K. Subjects covered include: properties of substances, thermodynamics, heat transfer, fluid mechanics, materials, instrumentation, and applications.

**Entrance requirements** Good degree in engineering or appropriate science subject.

Grant SERC and other institutions.

**Head of Department** Professor R G Scurlock

**Application and enquiries** The Academic Registrar, The University of Southampton, SO9 5NH. Telephone 0703 559122.

## 89 Engineering: aeronautical, aeronautics and space technology

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section*

- 89:1 Belfast, Aeronautical engineering, MSc/PhD**
- 89:2 Bristol, Aeronautical engineering, MSc/PhD**
- 89:3 City, Aeronautics, MPhil/PhD;** supervision available, research interests inc: *aerodynamics*: effects on stability and performance of vehicles, flow fields generated in working sections of high speed wind tunnels having ventilated wall liners, vortical flows and their measurement, dynamic response of tall buildings under various turbulent flows, spectra and correlation of surface pressures over models of buildings; *aircraft structures*: theoretical analysis of joints in orthotropic material with application to C-fibre reinforced plastics, static and fatigue strength of joints in C-fibre reinforced plastics, static and fatigue strength of adhesives; *air transport eng*: specific problems within gen fields of airline maintenance eng or airline eng economics and management. Contact DM Sykes
- 89:4 Cranfield, Aerodynamics, MSc/PhD**
- 89:5 Cranfield, Aircraft design, MSc/PhD**
- 89:6 Glasgow, Aeronautics and fluid mechanics, MSc/PhD**
- 89:7 Kingston Poly, Mechanical, aeronautical and production engineering, MPhil/PhD**
- 89:8 London (Imperial), Aeronautics MPhil/PhD;** also MSc; 1 yr course in computational fl mechanics and structural mechanics in collaboration with Maths Dept, 6 mth lecture course, 6 mth project, aerodynamics and structural streams run in parallel: MPhil/PhD; supervision available; current research inc: *aerodynamics* structure of turbulent shear flows with sp rel to interacting shear layers and rapidly-distorted flows, calculation of development of turbulent shear layers, physical characteristics of bluff body flows, numerical simulation of bluff body wakes, road vehicle aerodynamics, fl loading on offshore structures, hypersonics, unsteady gas dynamics and shock diffraction, transonic and supersonic slender bodies, unsteady aerofoil and spoiler flows; *structural mechanics* current research inc: buckling of plates and shells, hydraulic shock, optimum design, fibre composites, finite element methods, accident simulation, dynamics, exptl analysis; hydraulically and mechanically operated testing machines, autoclave and assoc facilities for production of bonded structures and fibre composites. Contact Professor PW Bearman
- 89:9 London (Imperial), Computational fluid dynamics, MPhil/PhD**
- 89:10 London (Queen Mary), Aeronautical engineering, MPhil/PhD;** research activities inc: *non-steady aerodynamics*, theoretical methods to calculate loads on aerofoils in unsteady conditions; *boundary layers and separated flows* low speed turbulent boundary layers, *jet characteristics* exptl and theoretical studies of 2-d and axisymmetric jets inclined at small angles to free stream; *wake characteristics* diffusion effects in 2-d and 3-d wakes behind lifting wings; *stability derivs* lateral stability derivs for wing-body combinations, *transoms*, theoretical methods for calculation of transonic behaviour of steady and oscillating aerofoils and wings, *wind turbines* aerodynamics of vertical axis wind turbines, *bluff body flows* parameters determining wake characteristics, *aerodynamics of road vehicles* car/caravan combinations; *aviomics* fire and flight control systems for military aircraft, *structural dynamics* vibration characteristics of solar array panel type structures in vac, *resonance testing and analysis* application of time domain system identification techniques, *flow visualisation in turbulent boundary layer* variety of lighting techniques, *wave erosion of sand and soil* effects of tillage practices on aeolian erosion. Contact Dr I. Bernstein
- 89:11 Manchester, Mechanics of fluids, MSc/PhD;** available in Dept of Aeronautical Engineering; supervision available, research in progress inc. air-to-air refuelling, fundamental studies of jets and jet noise and of non-linear wave motion aimed at understanding production and propagation of aerodynamic noise and affecting its reduction, radial supersonic jets, supersonic jet impingement, wave motion in stratified fls which has application to waves and turbulence in atm and oceans.

- condensation and propagation of shock waves in clouds sonic booms vortex phenomena  
 atmospheric vortices aircraft trailing vortices helicopter rotor vortices bluff body wakes pan  
 methods for separated flows pulsating flow with particular application to biofluid dynamics an  
 blood flows aerodynamics of bodies and wings at very high incidences development of computatio  
 nal methods in fluid dynamics high lift aerodynamics convective heat transfer flight simulation  
 Contact Professor P Montague
- 89 12 **Salford, Aeronautical and mechanical engineering** MSc/PhD supervision available main  
 research areas eng dynamics and control applied expert systems control eng eng dynamics flight  
 dynamics and control industrial systems eng computer integrated manufacture adv manufacturing  
 technology CAD CAE CAM design manufacturing processes manufacturing systems eng  
 aerothermofluid mechanics aerodynamics computational aerodynamics generalised duct design  
 and numerical prediction methods fluid mechanics thermodynamics materials and surface eng fluid  
 film lubrication fracture mechanics materials science surface coating technology Contact Dr KA  
 Whyte
- 89 13 **Southampton, Aeronautics and astronautics** MPhil/PhD
- 89 14 **Warwick, Fluid dynamics and thermodynamics** MPhil/PhD

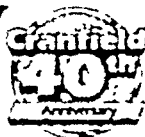
## Higher degrees by instruction

- Candidates are expected to hold a good honours degree in the subject of the course. A research project  
 (normally lasting three months) with submission of a written report, dissertation or thesis is normally  
 a part of these courses
- 15 **Bristol, Fluid mechanics** MSc 1c yr full course offered in alternate yrs next entry 1986 recog  
 nised by SERC course content numerical methods in fluid mechanics turbulence boundary layer  
 theory hydrodynamic stability water waves geophysical fluid mechanics heat and mass transfer  
 5 with project assessment by examination and dissertation Contact Dr EJ Walker
- 16 **Cranfield, Aeronautical aerodynamics** MSc
- Cranfield, Aerospace materials engineering** MSc
- Cranfield, Aerospace vehicle design** MSc
- Cranfield, Air transport engineering** MSc
- Cranfield, Air transport management** MSc
- Cranfield, Applied flight mechanics** MSc
- Cranfield, Avionics and flight control** MSc
- Cranfield, Bio-aeronautics** MSc
- Cranfield, Design of flow systems** MSc
- Cranfield (Silsoe), Bio-aeronautics** MSc
- Cranfield Poly, Astronomy and astronautics** MSc (CNA)
- Manchester, Applied mathematics and mechanics of fluids** MSc
- Nottingham, Computational methods and fluid mechanics** MSc
- Nottingham, Aeronautics and fluid mechanics** Diploma

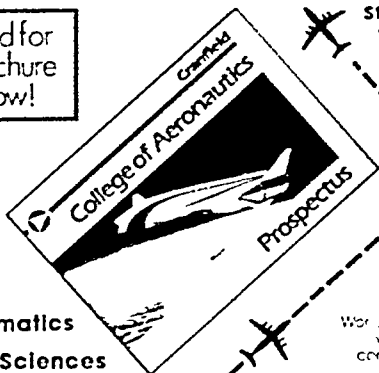
## Certificates and diplomas

- Nottingham, Aeronautics and fluid mechanics** Diploma

# leading to PhD or MSc in Aeronautics



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- Mathematics
- The Sciences
- Engineering

## Studies Include:

- Aerodynamics • Applied Flight Mechanics
- Avionics • Flight Control Systems
- Aerospace Vehicle Design
- Structural Design and Construction
- Air Transport Engineering and Management
- Bio-Aeronautics

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can put **Bursaries are  
available**

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Leigh-on-Sea

or by post to  
The Registrar  
College of Aeronautics  
Leigh-on-Sea

# GRADUATES

## Here's a new Challenge!

## College of Aeronautics



1997-1998

## 90 Engineering: biomechanical and biomedical

### Higher degrees by research

- 90 1 **Aberdeen**, *Biomedical physics and bioengineering*, MSc/PhD  
 90 2 **Bristol**, *Electrical and electronic engineering*, MSc/PhD  
 90 3 **City**, *Electrical engineering and applied physics*, MPhil/PhD  
 90 4 **Dundee**, *Biomedical engineering*, MSc/PhD  
 90 5 **Durham**, *Engineering science*, MSc/PhD  
 90 6 **Edinburgh**, *Medical physics and medical engineering*, MPhil/PhD supervision available topics in applications of physics or eng to medicine inc radiation dosimetry use of radionuclides in cardiology bone metabolism and body composition *in vivo* activation analysis use of ultrasound in imaging of body structures tissue characterisation and blood flow use of electronics in cardiology patient monitoring and microprocessor applications nmr imaging Contact Dr P Tothill  
 90 7 **N Staffs Poly**, *Biomedical engineering*, MPhil/PhD (CNAAB)  
 90 8 **Poly of Central London**, *Biochemistry, applied microbiology and biotechnology*, MPhil/PhD (CNAAB)  
 90 9 **Salford**, *Orthopaedic mechanics*, MSc/PhD  
 90 10 **Sheffield**, *Medical physics and clinical engineering*, MMedSci/PhD  
 90 11 **Strathclyde**, *Bioengineering*, MSc/PhD  
 90 12 **Surrey**, *Mechanical engineering*, MPhil/PhD  
 90 13 **Sussex**, *Biomedical engineering*, MPhil/PhD  
 90 14 **Warwick**, *Bioengineering*, MPhil/PhD

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses.

- 90 15 **Dundee**, *Biomedical engineering science*, MSc  
 90 16 **Strathclyde**, *Bioengineering*, MSc  
 90 17 **Strathclyde**, *Microbial technology*, MSc  
 90 18 **Surrey**, *Biomedical engineering*, MSc/Diploma

# 91 Engineering: chemical and biochemical

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 91:1 **Aston**, *Chemical engineering*, MPhil/PhD *See page 395*
- 91:2 **Bath**, *Chemical engineering*, MSc/PhD
- 91:3 **Belfast**, *Chemical engineering*, MSc/PhD
- 91:4 **Birmingham**, *Chemical engineering*, MSc/PhD *See page 396*
- 91:5 **Bradford**, *Chemical engineering*, MPhil/PhD
- 91:6 **Bradford**, *Powder technology*, MPhil/PhD
- 91:7 **Bristol Poly**, *Biotechnology*, MPhil/PhD (CNAA)
- 91:8 **Cambridge**, *Biotechnology*, MSc/PhD
- 91:9 **Cambridge**, *Chemical engineering*, MSc/PhD
- 91:10 **Cranfield**, *Biotechnology*, MSc/PhD
- 91:11 **Edinburgh**, *Chemical engineering*, MPhil/PhD; supervision available; research projects in: heterogeneous and homogeneous catalysis, biomedical eng esp study of thrombus formation and coagulation, reaction eng, properties of packed and fluidised beds and dispersions, heat and mass transfer investigation using novel methods such as laser holography, computer modelling of complex structures such as large chem plants, dynamics and control, turbulent drag reduction; well-equipped reaction eng labs, computer for real-time data collection and control, intelligent knowledge-based systems in chem eng design, energy economy in relation to distillation, drying and heat storage, control of heat pumps. Contact Dr JM Davidson
- 91:12 **Exeter**, *Chemical engineering*, MPhil/PhD
- 91:13 **Heriot-Watt**, *Chemical and process engineering*, MSc/PhD
- 91:14 **Leeds**, *Biotechnology*, MPhil/PhD
- 91:15 **Leeds**, *Chemical engineering*, MEng/MSc/MPhil/PhD *See page 396*
- 91:16 **Leeds**, *Fuel and energy*, MSc/MEng/MPhil/PhD; supervision available; research interests: combustion of natural gas and other gaseous fuels in pre-mixed and diffusion flames; computational and exptl studies of flame structure, formation of soot during combustion and its radiation; flame noise and flame turbulence, convective heat transfer from flames; shock tube studies of combustion and pyrolysis, computer modelling, spray combustion; high intensity combustion of gaseous and liq fuels, ignition and explosion phenomena; formation of combustion-generated pollutants and atm pollution, fire research, fluidised bed combustion and gasification of coal; solar energy and energy storage, alternative fuels. Contact Professor A Williams
- 91:17 **London (Imperial)**, *Biotechnology*, MPhil/PhD
- 91:18 **London (Imperial)**, *Chemical engineering and chemical technology*, MPhil/PhD
- 91:19 **London (UC)**, *Biochemical engineering*, MPhil/PhD; in Dept of Chem and Biochem Eng; current research programmes inc projects in fermentation; immobilised enzyme and cell technology; downstream processing of products from fermenters and other bioreactors; processing of products resulting from recombinant DNA technology and protein eng; protein processing technology; food process eng, high-level computer control of biotechnological processes; research facilities at UCL inc extensive mod pilot plant based on 100 L and 1000 L fermenters and associated downstream processing eqpt, applications welcomed from biochem and chem engineers, biochemists and microbiologists, successful applicants would join leading research teams in biochem eng. Contact Dr M Hoare
- 91:20 **London (UC)**, *Chemical engineering*, MPhil/PhD, current research programmes inc projects in combustion kinetics of reactions, engine studies, combustion of fuel oils, coal and coal-liq mixtures, air pollution, crystallisation nucleation and crystal growth, crystalliser design, dissolution, precipitation, fluid-particle systems fluidisation studies at high temps and pressures, liq fluidised beds and three-phase fluidisation, chem reactions in fluidised beds, particle technology,

# Engineering chemical and biochem

- rheology and mixing dispersion and suspension of solids in stirred tanks two-phase dynamics mass transfer in stirred vessels diffusion in porous catalysts mixing and solid particle systems Contact Dr AR Burgess
- 91 21 **Loughborough, Chemical engineering** MPhil/PhD supervision available plant engineering technology inc dust control powder flow water treatment process technology polymerisation reactors jet mixing solid systems inc scripta in chroma porous media Contact Dr A Foord
- 91 22 **Manchester (UMIST), Chemical engineering** MSc/PhD See page 396
- 91 23 **Manchester Poly, Mechanical production and chemical engineering** MPhil/PhD (CNA) adaptive predictive and self tuning techniques math modelling of processes and development of CAD techniques electrolytic process eng heat and mass transfer processes in films in rotating at high speeds pollution control and effluent treatment heterogeneous catalytic processes fluidised bed combustion energy storage use pattern of energy sources and development of new energy sources (SERC) Contact Rev Dr JH Harker
- 91 26 **Newcastle, Microbiology** MSc/PhD
- 91 27 **NE London Poly, Chemical engineering** MPhil/PhD (CNA) process control and computer applications development of steady state and dynamic model process plant batch process operational control state and parameter estimate for improvement on line digital computer process control mass transfer processes absorptive drying of ethan effect of tray hydraulics gas chromatography design of process equipment stresses in bulk particulate solids 2 phase flow studies gas chromatography design of process equipment stresses in bulk particulate polymer eng investigation into structure props and production of 2 phase polymeric materials environmental eng application of cryogenics and elutration to waste recycling water quality and pollution studies incineration of chlorinated hydrocarbons industrial effluent treatment process patents analysis of patent litigation patent portfolios process development coal liquefaction coal characterisation ammoniation reactions salting-out crystallisation biochem eng fermenter studies fundamental studies of biochem kinetics downline processing Contact Dr JA Wilson
- 91 29 **Poly of Central London, Biotechnology research** MPhil/PhD (CNA) research interests inc biochem eng (inc anaerobic and aerobic digestion of waste materials microbial synthesis of polymers) centrifugal molecular distillation of high boiling heat sensitive materials, fast solid/solid reactions rheology of non Newtonian fluids pyrolysis of coal recovery of protein from cheese whey effluent FTIR spectroscopy of propellant flames Contact Dr GJ Rees
- 91 30 **Poly of Wales, Chemical engineering** MPhil/PhD (CNA) supervision available current research interests inc biochem eng (inc anaerobic and aerobic digestion of waste materials microbial synthesis of polymers) centrifugal molecular distillation of high boiling heat sensitive materials, fast solid/solid reactions rheology of non Newtonian fluids pyrolysis of coal recovery of protein from cheese whey effluent FTIR spectroscopy of propellant flames Contact Dr GJ Rees
- 91 31 **Salford, Chemical and gas engineering** MSc/PhD supervision available research interests in following areas some specific projects named heat pumps and heat transfer development of new refrigerants improvement of heat transfer to and from heat pump exchangers chem reaction eng heterogeneous gas solid reaction systems catalyst deactivation inc study of poisoning of catalysts by impurity in feed stream multiphase flow systems properties of 3 phase systems containing gas liq and dispersed solids flow of 2 immiscible liqs through porous bed gas eng study of variety of heating strategies using gas in high thermal capacity low energy houses (inc ventilation humidity internal heat transfer and storage) more effective network analysis techniques slphase equilibria development of various algorithms process optimisation and simulation development of computer algorithms for soln of steady state chem process optimisation problems process dynamics and control dynamic modelling of chem processes on line digital control Contact PJ Digory
- 91 32 **Sheffield, Biotechnology** MSc/PhD supervision available in Wolfson Inst of Biotechnology research interests various aspects of natural product synthesis biochem and physiol technology of genetics of eukaryotic systems cell-cell recognition yeast biochem and physiol technology of batch semi-continuous and continuous culture in vessels up to 250 litres bioreactor design and construction fermentation computer control Contact Professor MFW Fowler
- 91 33 **Sheffield, Chemical engineering and fuel technology** MEng MScTech PhD research topics inc computer aided process synthesis and design integration objectives cooking of heavy petroleum feedstocks and other processes con



of substitute natural gas; major hazards and loss prevention techniques in chem industry; explosions and fires; mass transfer with chem reaction; optimal allocation of design margins; computer flowsheeting theory; novel solvent extraction techniques with applications in biochem processing; social and econ studies of chem and allied industries; also topics in surface eng inc electropolishing of metals and anodic oxidation of Al; fluidised bed electrodes; electrodeposited composite coatings; electroless composite coatings; electrophoretically-deposited coatings; electroforming of alloys; electrolytic production of alloy powders; corrosion studies. **Contact** BG Reuben

**91:35 Strathclyde, Chemical and process engineering, MSc/PhD**

**91:36 Surrey, Chemical and process engineering, MPhil/PhD;** main areas of research, some specific projects named: *particle technology*: fluidisation and fl bed processing; gas cleaning and filtration; attrition and erosion; agglomeration and coating; storage and handling of bulk materials; *adsorption technology*: energy-efficient liq purification processes; gas separation by adsorption; pressure swing adsorption; adsorbent characterisation; manufacture and application of novel adsorbents; *biotechnology*: control of fermenters; treatment of industrial waste liquors; purification of biol active species; mechanics and dynamics of cell cultures; *fuel technology*: flame control; grate and vortex combustion; flow modelling and simulation; *domestic eng*: quantification and control of surface cleanliness. **Contact** Dr NF Kirkby

**91:37 Teesside Poly, Chemical engineering, MPhil/PhD (CNA A);** incorporates applied research project with active co-operation of industry; *recent areas of research inc*: reactor eng, separation processes and design and process economics, biochem eng; *current projects inc*: exptl study of induction heated catalytic reactor, biochem eng, isolation of proteins and downstream processing; dissociation, metals and solvent-gas extraction and highly non-ideal distillation processes, solid-liq mixing, crystallisation and droplet formation; plant dynamics and computer control, optimisation, manpower forecasting, computer-aided cost estimation and plant reliability. **Contact** Dr AM Gerrard

**91:38 Wales (Cardiff), Mechanical engineering and energy studies, MSc/PhD**

**91:39 Wales (Swansea), Chemical and biochemical engineering, MSc/PhD**

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research proje (normally lasting three months) with submission of a written report, dissertation or thesis is normal a part of these courses.*

**91:40 Birmingham, Biochemical engineering, MSc(Eng) See page 396**

**91:41 Birmingham, Process biotechnology, MSc See page 396**

**91:42 Bradford, Chemical engineering, MEng/MSc**

**91:43 Durham, Biotechnology, MSc**

**91:44 Hatfield Poly, Biotechnology, MSc (CNA A)**

**91:45 Leeds, Combustion and energy, MSc**

**91:46 Leeds, Integrated design of chemical plant, MSc**

**91:47 London (Birkbeck), Biophysics and bioengineering, MSc**

**91:48 London (Imperial), Advanced chemical engineering, MSc/DIC**

**91:49 London (Imperial), Biotechnology, MSc/DIC**

**91:50 London (Imperial), Technology and development, MSc/DIC**

**91:51 London (UC), Biochemical engineering, MSc/Diploma, 1 yr f-t (deg in pure science req for Facult of Eng course, deg in chem or mechanical eng req for Faculty of Science course);** 2 separate bu integrated courses for students with backgrounds in science or eng; *Faculty of Eng*: topics in biochem eng and chem eng, inc unit operations, process analysis and computing; exptl work in ad pilot-plant facility; design undertaken for complete biol industry plant; *Faculty of Science*: topics in biochem eng and biochem, inc enzymology, microbial metabolism and genetics, use of pilot-plan facilities for exptl and project work, 3 mth project undertaken in conjunction with research team (MSc recognised for SERC studentships). **Contact** Dr NM Fish

**91:52 Loughborough, Chemical plant operation and management, MSc**

**91:53 Manchester (UMIST), Advanced chemical engineering, MSc/DipTechSci**

**91:54 Manchester (UMIST), Advanced chemical technology, MSc/Diploma**

**91:55 Manchester (UMIST), Bioreactor systems, MSc/Diploma See page 396**

**91:56 Poly of Central London, Biotechnology, MSc (CNA A)**

**91:57 Sheffield, Combustion science and pollution control, MScTech**

91.65 Bradford, Chemical engineering, Diploma  
91.66 Cambridge, Chemical engineering, Certificate  
91.67 Leeds, Fuel and energy, Diploma  
91.68 : : : : : -

91:69 " : :  
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## UNIVERSITY OF ASTON

**Degree** MPhil/PhD by research  
**Length of course** 2 to 3 years  
**No of places** Up to 15 a year

**Description of course** It is the aim of the Department to provide a spectrum of research activity from the fundamental to the more applied aspects of chemical engineering. There are two research groups in the Department - The Mass and Heat Transfer Group and The Chemical and Biochemical Processes Group. These groupings express the research

engineering processes for the separation of mixtures of chemicals. The three processes of particular interest are *liquid-liquid extraction, spray drying, and distillation*; the

Group is also concerned with resource and energy saving and heat transfer studies. The work of the Chemical and Biochemical Processes Group is centred on the modelling design and evaluation of 1 reactors for biochemical and thermochemical processes, 2 systems for separating biochemicals using production scale chromatography and ultra filtration membranes, and 3 applied computation and risk assessment studies. During the development of a new process it is necessary to make comparisons with alternative processes and so cost analysis and economic evaluation are also active interests.

**Entrance requirements** Applicants should have a good first degree in chemical engineering or a relevant discipline.

**Grants** SERC and University Studentships are available for suitably qualified candidates.

Applications and enquiries Dr E. L. Smith, Department of Chemical Engineering, Aston University, Aston, Birmingham B4 7ET. Telephone 0121 359 3111.

## University of Birmingham

### DEPARTMENT OF CHEMICAL ENGINEERING

**Degrees** MSc(Eng) by course and project 1 year full-time  
MPhil(Eng)/PhD by research 1-3 years full-time

**Taught course** MSc Biochemical Engineering/Process

**Biotechnology.** For students interested in application of biological organisms to manufacturing and service industries as follows

Module 1 Biology and biochemistry (Biochemical engineers),  
Chemical engineering (Process biotechnologists), Modules 2-6  
Common to all students (Biological process development, bio-  
reactor design, waste treatment/applied genetics, instrumentation  
and microprocessor control, food preservation) Research project  
4 months approx

**Entry requirements** Biochemical engineers good honours degree in  
chemical engineering, Process biotechnologists good honours  
degree in biochemistry, microbiology or a related discipline

**Research** Main research areas include

Biochemical engineering/Process biotechnology  
Minerals engineering, particulate technology materials processing  
Mixing in agitated vessels  
Heat transfer and fouling  
Separation processes, interfacial phenomena  
Process simulation and control  
Catalyst preparation and development, chemical processing

**Entry requirements** A good honours degree in chemical engineering,  
biological sciences or related subject

**Head of Department** Professor J Bridgwater

**Enquiries** Dr A J Barker, Postgraduate Tutor, Department of Chemical  
Engineering, The University of Birmingham, PO Box 363 Birmingham  
B15 2TT, UK Telephone 021-472 1301 ext 3005

## UNIVERSITY OF LEEDS

### CHEMICAL ENGINEERING

**Degrees** MSc(Eng)/MPhil/PhD by research Period of study 1 3 years  
full time 2 5 years part time MSc by course and project Period of  
study 1 or 2 years full time

**Research courses** in addition to traditional MPhil and PhD research pro-  
jects the Department offers one year full time research projects leading  
to the degree of MSc(Eng) The main areas of research centre on *CAD*  
and *database studies* for the integrated design of chemical process plant  
optimal design of integrated energy systems *on line control studies* for  
chemical reactors *facilities* for the study of reaction kinetics reactor  
stability and optimisation using experimental reactors coupled to an ex-  
tension network of Departmental and University microcomputers mini  
computers and mainframes *chemical process development* novel nitric  
acid process evaluation catalyst development and evaluation *measure-  
ment and correlation of thermodynamic properties of mixtures* apparatus  
available for measuring phase equilibria enthalpies and Joule Thompson  
coefficient heat pump studies two phase thermodynamic properties  
*dispersed systems* using ultra high speed cine photography studies in  
volving formation of sprays atomisation of liquids flow of particulate  
suspensions *heat transfer* experimental and theoretical studies for the  
design of regenerators and reactors *electrolysis* using fluidised electrode  
systems *solid liquid systems* experiments to evaluate multi stage  
counter current washing *computing* extensive use for on line experi-  
mental and theoretical projects using workstations microprocessors and  
Departmental Data General MV/10 000 linked to dual processor POP VAX  
11/780 and PRIME and AMDAHL V7 mainframes

**Entry requirements** Good honours degree in chemical engineering or a  
related subject

**Taught course** MSc with options to concentrate on process design, bio-  
technology unit operations process control or management studies  
Central theme is broadening of background in chemical engineering to  
give students confidence to tackle real industrial problems Exams during  
and at end of course work thesis at end of project

**Entry requirements** Honours degree in chemical engineering or a related  
subject and/or suitable professional experience

**Head of Department** Professor Colin McGreavy

**Enquiries** Professor Colin McGreavy Department of Chemical Engineer-  
ing Leeds University Leeds LS2 9JT UK Telephone 0532 431751  
ext 7284

## UMIST

### UNIVERSITY OF MANCHESTER

### INSTITUTE OF SCIENCE AND TECHNOLOGY

#### Postgraduate Studies in Chemical Engineering

##### ● MSc in Reaction and Separation Systems (91 53)

The course is concerned with advanced concepts in the  
design of chemical reaction and separation processes

##### ● MSc in Process Integration

The objective of this course is to familiarise the student with the  
latest techniques for the design of integrated processes

##### ● MSc in Bioreactor Systems

This course is concerned with the microbiology and biochemical  
engineering of fermentation processes

These MSc courses comprise two terms of lectures and an extended  
5 month dissertation project They provide excellent training for  
candidates proposing a career in research & development

##### ● MSc/PhD by Research (91 22)

A wide range of interesting and challenging projects are available,  
many sponsored by industry, government departments and the EEC

For further details write quoting Ref 86/1 to  
The Postgraduate Admissions Tutor  
Department of Chemical Engineering  
UMIST, Manchester M60 1QD ENGLAND

## The University of Sheffield

The Department of Chemical Engineering and  
Fuel Technology offers a

### DIPLOMA in COMBUSTION and POLLUTION TECHNOLOGY

This Diploma is designed as a conversion course for graduates in  
scientific, engineering and other technological subjects who  
wish to gain a thorough understanding of the principles and  
practice of combustion and pollution technology It is also a  
suitable preparation for those wishing to proceed to a higher  
degree in fuel and energy topics

The course length is one academic year beginning in October  
and will cover, by lectures, practical classes and tutorials, the  
following topics

**Fuel Processing**  
**Fuel Plant Technology**  
**Fuel and Energy Engineering**  
**Chemical and Power Thermodynamics**  
**Environmental Pollution**  
**Combustion and Pollution Technology**  
**Nuclear Reactor Engineering**

with examination of these lecture courses taking place the  
following June

Industrial visits will form an integral part of the course  
For further information and an application form write as soon as  
possible to

Dr P J Foster

Postgraduate Admissions Tutor  
Department of Chemical Engineering and Fuel Technology  
The University of Sheffield  
Newcastle Street, Sheffield S1 3JD  
United Kingdom

## Cryogenics

**Degree MSc/PhD**

**Length of course** 1 year full time (MSc) 3 years full time (PhD) part time by arrangement

**Description of course** The Institute of Cryogenics at Southampton covers all training and research fields in the application of low temperatures below about 250 K. Subjects covered include cryogenic systems engineering and design refrigeration and liquefaction mechanical and thermal properties of concrete composites and other structural materials cold electronics heat transfer and fluid stability in single and 2 phase systems improvement of multi layer and foam insulations storage handling

**SOUTHAMPTON U**

and instrumentation of LHe LHe LN LOX  
LPG cryosurgery and cryomedical techn  
trans-sonic wind tunnels space cryogenic  
mechanical systems magnetic separation  
superconducting magnets for minerals and  
cryo-chemistry  
**Entrance requirements** Good degree in eng  
appropriate science subject  
Grant SERC and other institutions  
**Head of Department** Professor R G Scutlock  
**Application and enquiries** The Academic Re  
University of Southampton SO9 4NH Tele  
0703 559122

## Alternative energy for developing countries

**Degree MSc/Diploma**

**Length of course** MSc - 15 months full time Diploma 12 months full time

**Number of places** 20

**Description of course** The aim is to provide an understanding of the basic principles of energy resources conversion and utilisation related to the use of alternative energy in developing countries. Other topics covered include technical choice and appropriate technology and energy policy and planning. The course is placed on interdisciplinary teaching. Emphasis is divided into two parts: part one consists of lectures laboratory work and a written project following the examinations during the second part the participants undertake a practical project

**UNIVERSITY OF RE**

relevant to their own countries' needs  
**Entrance requirements** For the MSc an honou  
an appropriate science or technological subject  
Diploma a degree or equivalent in an appropri  
subject. One year's practical experience or longer  
be beneficial  
**Grant** Overseas students should apply for an awar  
one of the International Aid Agencies through the  
Governments SERC and award studentships are  
available for U.K. applicants  
**Head of department** Professor J D Dunn  
**Applications and enquiries** Ms J C Lacey MSc Dip  
Course Co-ordinator Department of Engineering  
Box 225 University of Reading Reading RG6 2A  
Telephone 0734 876123 ext 7112 Telex 874813 RL L



# IMPERIAL COLLEGE

of Science and Technology

UNIVERSITY OF LONDON

## Department of Chemical Engineering and Chemical Technology

The interests of the Department range from technological studies of processes and equipment, through techniques for planning, design and control of processes, to fundamental scientific study of the underlying physical and chemical phenomena. Excellent facilities are available for study towards MSc, MPhil and PhD Degrees.

Current fields of RESEARCH are

Computer Aided Design and Process Control  
Separation Processes  
The Physical Properties of Fluids, Solids and Interfaces  
Applied Catalysis and Reaction Engineering  
Nuclear technology  
Combustion and Energy  
Biotechnology  
Technology for Developing Countries

One Year MSc COURSES are offered in

Advanced Chemical Engineering  
Nuclear Technology

The teaching and research laboratories are exceptionally well equipped and fully backed with comprehensive technical services. The facilities available include high pressure engineering laboratories for studies up to 80,000 bar, a special laboratory complex for high energy radiation studies equipped with a Cobalt-60 source and Van de Graaff generator, a high-grade clean laboratory for work on surfaces, a pilot plant laboratory with three computer controlled plants, and a wide range of analytical facilities. The Department has two classrooms equipped with a total of 70 visual display terminals of which 42 are connected to the College and University computer complexes and 28 are connected to a Departmental IBM 4341 computer with 12M bytes of core memory.

SERC studentships are available for research. There are also a number of CASE awards and Research Assistantships, associated with specific research projects, sponsored by industry or government establishments.

The DIC (Diploma of Imperial College) is awarded to all who qualify for a higher degree and to those who, having previously obtained a suitable first degree, complete at least one year of postgraduate research, assessed by submission of a dissertation and/or examination.

Further information about the Department and/or College may be obtained from  
The Registrar, Imperial College, London SW7 2AZ

## University College of Swansea

### Department of Chemical Engineering Postgraduate Studies

Founded in 1920, the College is one of the seven constituent institutions of the University of Wales. Since its foundation, the College has always been outward looking and draws its students from all over the world. Currently over 490 students are from overseas (from 59 countries) and they bring a cosmopolitan atmosphere to the life of the College. Its location, in a large landscaped area of parkland just west of the City of Swansea, and adjacent to the beautiful Gower Peninsula ensures that the College is a most pleasant place in which to study. The City of Swansea enjoys excellent road and rail links with London and the principal cities of Britain.

The Department of Chemical Engineering is housed in a large modern building and has excellent facilities and technical support for both teaching and research.

### MSc in Chemical Engineering by examination

This scheme is designed for graduates who wish to complete postgraduate studies in 12 months. Courses are arranged on an optional basis over a period of 6 months to suit the individual requirements of each student. Typical packages can be provided in the areas of reactor design, control, plant design, etc. The programme is completed with a short research project.

For further information please write to: The Postgraduate Admissions Tutor,  
Department of Chemical Engineering, University College Swansea, Singleton Park, Swansea SA2 8PP, Wales, UK.

Minimum entrance requirement is a lower second class honours degree or its equivalent (normally in Chemical Engineering).

### MSc in Biochemical Engineering by examination

This is a 12-month programme designed for those wishing to pursue future careers in the biochemical engineering industry. Courses are provided in such topics as biochemical reactors, relevant biochemistry and microbiology, optimisation, biochemical process design, etc. The programme is completed by a short research project. The minimum entrance requirement is a lower second class honours degree or its equivalent in Chemical or Biochemical Engineering, or in Chemistry, Biochemistry or Applied Biological Sciences.

### PhD

Major areas of research in the department cover hydraulic conveying, packed-bed reactors, mass and heat transfer in packed and fluidised beds, reactor control, non-Newtonian flow, chromatography, computer-aided design, air and water pollution, effluent treatment, protein production.

It normally requires three years to obtain the degree of PhD.

Minimum entrance requirement is an upper second class honours degree or its equivalent in a suitable discipline.

### Diploma in Chemical Engineering

This is a 12-month conversion programme suitable for graduates of other disciplines and consists of basic chemical engineering coursework and a major design project. The minimum entrance requirement is a lower second class honours degree or its equivalent. Successful completion of the Diploma forms a basis for admission to an MSc course.

## 92 Engineering: civil and structural

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section*

- 92 1 Aston, Civil engineering and construction, MPhil/PhD**  
**92 2 Bath, Architecture and building engineering, MSc/PhD**  
**92 3 Belfast, Civil engineering, MSc/PhD** supervision available research mainly concerned with solution of problems arising in construction industry study of structures and their foundations construction materials hydraulics public health eng and water resources and traffic and highway eng principal current research projects inc hydrodynamics of wave energy converters ultimate strength analysis/design of reinforced concrete and steel structures study of slab column structures under earthquake loading design of offshore concrete structures computer analysis of suspension  
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 .  
**92 4 Birmingham, Civil engineering MSc/PhD**  
**92 5 Bradford, Civil and structural engineering, MPhil/PhD**  
**92 6 Brighton Poly, Civil engineering, MPhil/PhD (CNA)**  
**92 7 Bristol, Civil engineering MSc/PhD**  
**92 8 City, Civil engineering MPhil/PhD** supervision available hydraulics and hydrology sediment transport free surface flows waves wave structure interactions flow resistance and secondary  
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 .  
 destructive stress measurement in steel plates geotechnical eng stress strain behaviour of natural soils lab tests stress path testing of soils modelling and field measurements of ground movements finite element calculations using critical state soil mechanics structural behaviour of  
 .  
 .  
**92 9 Coventry (Lanchester) Poly, Civil engineering and building, MPhil/PhD (CNA)**  
**92 10 Dundee, Civil engineering MSc/PhD** See page 406  
**92 11 Edinburgh, Civil engineering MPhil/PhD**  
**92 12 Glasgow, Civil engineering MSc/PhD**  
**92 13 Heriot Watt, Civil engineering MSc/PhD**  
**92 14 Kingston Poly, Civil engineering MPhil/PhD (CNA)**  
**92 15 Leeds, Civil engineering MEng/MPhil/PhD** supervision available for research current interests inc structural eng shear strength of composite concrete bridge decks creep of concrete fatigue of partially pre stressed concrete beams bolted steel connections eng materials properties of

bounded flow, unsteady free surface flow; *solar energy*: space heating and cooling using passive solar energy. Contact Professor DD Mara

92:16 **Leeds Poly**, *Building and civil engineering*, MPhil/PhD (CNA)

92:17 **Leicester**, *Civil and structural engineering*, MPhil/PhD

92:18 **Liverpool**, *Civil engineering*, MEng/PhD; facilities for research work in most branches of civil eng, plus large labs for work in structures, hydraulics, coastal and offshore eng. Contact Miss P Breen

92:19 **Liverpool Poly**, *Civil engineering*, MPhil/PhD (CNA)

92:20 **London (Imperial)**, *Civil engineering*, MPhil/PhD

92:21 **London (KQC)**, *Civil engineering*, MPhil/PhD

92:22 **London (Queen Mary)**, *Civil engineering*, MPhil/PhD; supervision available, research inc: *structures*: inelastic analysis of plate and shell structures, dynamic transient analysis of shell-core systems, min wt design of core-stiffened cylindrical shells; *hydraulics*: shear stress distribution and vel profiles in river channel floodplain cpd sections, characteristics of labyrinth weirs with sp ref to scale-effects; *hydrology*: development and refinement of math flood routing models, numerical modelling of river systems, *continuum mechanics*: development of mapping finite elements for economical and accurate soln of continuum problems; *geotechnical eng*: gen behaviour and creep of soft rocks with ref to foundation design, behaviour of large driven piles, soil-structure interaction of buildings supported on shallow and deep foundations; *transport eng*: skid resistance of pavement surfaces, analytical techniques for accident reconstruction, transport planning for recreational activities; *construction management*: controlling time and money on large civil eng projects, project control by client organisations. Contact Professor TJ Poskitt (Head of Dept)

92:23 **London (UC)**, *Civil and municipal engineering*, MPhil/PhD; supervision available, current research inc: *concrete and concrete structures*: cementitious grouts for offshore structures; lab and site methods of non-destructive testing of concrete; *dynamics*: vibration and stability of structures subjected to environmental loadings of wind, wave and earthquakes; computer simulation and non-deterministic analysis methods with power spectral studies; *fl mechanics*: structure of turbulence in boundary layers; oscillatory waves and wave/current interaction; wave loading on offshore structures; *public health eng*: physical, chem and microbial aspects of treatment processes for water supply and sewage disposal; *soil mechanics*: stress-strain behaviour of soils and reinforced earth relevant to environmental loadings of sea waves, wind and earthquakes; exptl developments, radiography to determine internal strain distributions and controlled continuous variations of principal stress directions; process eng; materials handling; structural eng; buckling strength and stability of structures, stability of gen systems; liner dynamics and collapse of shell behaviour; *transport*: see Engineering: traffic, transport and highway. Contact Dr JRF Arthur, Post Graduate Adviser

92:24 **Loughborough**, *Civil engineering*, MSc/PhD

92:25 **Manchester**, *Civil engineering*, MSc/PhD; supervision available; research in following fields, some specific projects named: *steel structures*: strength and elastic buckling behaviour of folded plate panels under complex loading, stability problems in plastic design of steel frames, properties of composite cylindrical shells under pressure and applications to offshore structures *concrete structures*: fatigue of rc beams and their components, new connectors for composite construction, novel ways of combining steel and concrete, strengthening existing concrete structures; *soil structures*: offshore gravity and deep-sea oil-production platforms; *strength of soil materials*: influence of cyclic loading on liquefaction of saturated sands and softening of clays with sp ref to offshore structures; *hydrodynamics*: studies of estuaries, waves, currents, turbulence, heat transfer, boundary layers, evaporation, geophysical and groundwater flows, flood forecasting, forces on offshore structures, sedimentation transport, combined sewer design, storage requirements, quality of combined sewage flows and their impact on receiving watercourses, analytical computer vision, hydrodynamic impact and siltation around structures; *maritime civil eng*: MSc by instruction. Contact Professor P Montague

92:26 **Manchester (UMIST)**, *Civil and structural engineering*, MSc/PhD; supervision for research, interests in photogrammetry, hydraulics, soil mechanics, project management, transportation, community eng, water pollution control, water resource planning, offshore eng; *projects inc*: quantitative imagery analysis and accuracy in short-range photogrammetry, automated surveyed system, response of floating structures to waves, vortex-excited oscillation of pipelines, centrifuge modelling of soil structures and foundations, lateral loading of piles, risk management of construction contracts, cost estimating, yield of water supply reservoirs, operation and maintenance of water and wastewater treatment plants, transport policy, planning and operation, fatigue and fracture in welded steelwork, offshore structures, bridge girders, ultimate load behaviour of reinforced concrete and steel framework, reinforced concrete joints, dynamic behaviour of suspen-

sion bridges and development of structural eng computer systems and computer graphics.

- 92 27  
92 28  
92 29 N Staffs Poly, *Mechanical and civil engineering*, MPhil/PhD (CNAAC)
- 92 30 Nottingham, *Civil engineering*, MPhil/PhD
- 92 31 Paisley CT, *Civil engineering*, MPhil/PhD (CNAAC)
- 92 32 Plymouth Poly, *Civil engineering*, MPhil/PhD (CNAAC) supervision for research available main
- 92 33
- 92 34 Portsmouth Poly, *Civil engineering*, MPhil/PhD (CNAAC)
- 92 35 Salford, *Civil engineering* MSc/PhD See page 407
- 92 36 Sheffield, *Civil and structural engineering*, MEng/PhD
- 92 37 Sheffield City Poly, *Civil engineering*, MPhil/PhD (CNAAC)
- 92 38 Southampton, *Civil engineering*, MPhil/PhD
- 92 39 Southampton, *Irrigation studies*, MPhil/PhD
- 92 40 South Bank Poly, *Civil engineering*, MPhil/PhD (CNAAC) current research topics inc rubble mound breakwaters repair and maintenance of concrete and masonry structures performance monitoring at full scale of geotechnical structures numerical analysis techniques applied to study of soil structure interaction
- 92 41 Strathclyde, *Civil engineering* MSc/PhD
- 92 42 Sunderland Poly, *Civil engineering*, MPhil/PhD (CNAAC)
- 92 43 Surrey, *Civil engineering* MPhil/PhD supervision available research in following areas some
- 92 44 Sussex, *Mechanical and civil engineering*, MPhil/DPhil
- 92 45 Teesside Poly, *Civil and structural engineering and building*, MPhil PhD (CNAAC)
- 92 46 Thames Poly, *Civil engineering*, MPhil/PhD (CNAAC)
- 92 47 Trent Poly, *Civil and structural engineering*, MPhil/PhD (CNAAC)
- 92 48 Ulster, *Civil engineering*, MPhil DPhil
- 92 49 Wales (Cardiff), *Civil and structural engineering*, MSc/PhD supervision available research interests inc steel plate and box girders aluminium girders multi-cellular marine structures composite flooring slabs with profiled steel sheeting optimisation and optimum design of structures soil structure interaction stability and dynamics of structures theorems of structural variation model analysis as design tool analysis of shells development of finite elements based on strain stability of masonry arches behaviour of cable nets active control of structures fibre reinforced materials fracture mechanics non-destructive testing of concrete stress strain time relationships for clays heat and mass transfer in soils flow of water in partially saturated soils constitutive relationships for anisotropic soils development of computerised soil testing facilities performance of embankments on soft clay foundations flow in porous media satellite imagery in water resources river erosion in cohesive soils hydrological data in damage analysis use of robotics in civil eng Contact Dr IIR Thomas
- 92 50 Wales (Swansea), *Civil engineering*, MSc/PhD supervision available research activities inc finite element analysis development of gen math approaches and computer programs for applications in structural fl and geomechanics structural mechanics numerical methods applied to structural elasticity and plasticity and large deformation problems analysis of bridges dams and nuclear reactors earthquake and wave response of offshore structures model testing fl mechanics



harbour oscillations, flow through granular media, seepage studies, degradation of river beds, dispersion of pollutants in estuaries etc. use of numerical and exptl techniques; *geomechanics*: flow of soils, effects of pore water pressure and cyclic load on foundations, gen applications in rock mechanics, numerical applications to fracture mechanics, studies of constitutive relations of soils and numerical soln of soil mechanics problems by finite element methods, exptl studies in concrete technology. Contact Dr DJ Naylor

- 92:51** **Wales (UWIST), Civil engineering and building technology, MEng/PhD;** opportunities for f-t research available in a number of fields inc: concrete technology, geotechnical eng and eng geol, highway and traffic eng, hydrology and water resources technology, structural eng, application of computers in civil eng and building technology. Contact Drs JP Baty or SP Bentley
- 92:52** **Warwick, Civil engineering, MPhil/PhD**

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses*

- 92:53** **Belfast, Civil engineering, MSc Diploma, 1 yr f-t; 3 yrs p-t; course content:** 5 modules from range plus project dissertation, modules inc: foundations, structures, water eng, traffic and highways, computing, management, materials, planning, design; (Cert awarded on completion of 1 module and exam, Diploma awarded on completion of course if MSc standard not achieved). Contact JD Ferguson
- 92:54** **Birmingham, Construction management, MSc** See page 406
- 92:55** **Birmingham, Foundation engineering, MSc** See page 406
- 92:56** **Birmingham, Water resources technology, MSc** See page 406
- 92:57** **Bradford, Structural engineering, MSc/Diploma**
- 92:58** **Cambridge, Soil mechanics, MPhil**
- 92:59** **City, Civil engineering (highways and transport), MSc**
- 92:60** **City, Civil engineering (structures), MSc, min 14 mths f-t; min 2 yrs p-t (at least good 2nd class honours deg req), course content** analytical and professional; *compulsory modules*: maths, indeterminate structures, materials, continuum mechanics, finite element methods, dynamic stability, plates and shells, foundations eng; *elective modules*: 2 from design of concrete structures, design of steel and composite structures, shell, space and tension structures, marine structures, bridge eng, planning control and economics; exptl and/or analytical project. Contact Dr S Gill
- 92:61** **Cranfield, Engineering construction project management, MSc**
- 92:62** **Cranfield, Strategic planning, MSc**
- 92:63** **Cranfield, Wind engineering, MSc**
- 92:64** **Dundee, Civil engineering, MSc/Diploma** See page 406
- 92:65** **Heriot-Watt, Hydraulics, MSc/Diploma,**
- 92:66** **Heriot-Watt, Soil mechanics, MSc/Diploma**
- 92:67** **Heriot-Watt, Structural engineering, MSc/Diploma**
- 92:68** **Leeds, Civil engineering in hot climates, MEng, 1c yr f-t; concerned with civil eng problems in tropics and subtropics with emphasis on needs of developing countries; basic core:** development economics and planning, project appraisal techniques, surveying, management, alternative energy, civil eng materials; *2 options from:* construction eng, tropical public health eng, irrigation eng, highway eng, transport planning and management; plus either dissertation or design project and long essay. Contact Professor DD Mara
- 92:69** **Leeds, Construction engineering, MSc, 1c yr f-t; 2c yrs p-t; course content:** gp of subjs from: concrete in construction (structural elements and design, concrete materials, concrete construction and selected options); or construction management (gen and project management, construction economics, stat methods, computer applications, foundation eng, building services eng); small gp projects; feasibility study; dissertation. Contact Professor DD Mara
- 92:70** **Liverpool, Environmental civil engineering, MEng/Diploma**
- 92:71** **Liverpool, Maritime civil engineering, MEng/Diploma**
- 92:72** **Liverpool, Structural engineering, MEng/Diploma** See page 406
- 92:73** **London (Imperial), Concrete structures, MSc/DIC, 1 yr f-t (deg in civil eng req, practical civil eng experience desirable), syllabus, analysis and design in context of concrete materials and structures; phil and design of structures, mechanics of materials, eng analysis, eng computation, structural**



project management, finite elements, properties of materials; assessment by exam and dissertation. Contact Professor PA Thompson or Dr TE Taylor

92:83 Newcastle, *Engineering hydrology*, MSc

92:84 Newcastle, *Hydraulic engineering*, MSc

92:85 Newcastle, *Soil mechanics and foundation engineering*, MSc

92:86 Newcastle, *Structural engineering*, MSc

92:87 Nottingham, *Engineering surveying*, MSc

92:88 Poly of Wales, *Civil engineering*, MSc (CNA A)

92:89 Sheffield, *Civil and structural engineering*, MEng

92:90 Southampton, *Advanced structural engineering*, MSc/Diploma

92:91 Southampton, *Irrigation engineering*, MSc/Diploma

92:92 Southampton, *Soil conservation and land reclamation engineering*, MSc/DUS

92:93 Strathclyde, *Hydraulics, hydrology and coastal dynamics*, MSc/Diploma

92:94 Strathclyde, *Structural engineering*, MSc/Diploma

92:95 Surrey, *Bridge engineering*, MSc/Diploma

92:96 Surrey, *Geotechnical engineering*, MSc/Diploma, 2 yrs p-t; intended for practising civil engineers and eng geologists from consultancies, contracting and local authorities; *areas of study inc*: eng properties of soils, critical state soil mechanics, site investigation, foundation eng, slope and embankment stability, eng geol and rock mechanics, adv lab testing techniques with emphasis on application to practical problems, seepage and groundwater control, design and construction of earth dams, field instrumentation, earth retaining structures, computer soln of geotechnical problems, geotechnical processes, soil mechanics aspects of motorway and airfield construction; lab work, project and dissertation. Contact Dr CRI Clayton

92:97 Surrey, *Structural engineering*, MSc/Diploma, 1c yr f-t: 2 yrs p-t; intended mainly for practising civil engineers, also useful for research workers; aims to help engineers to apply latest advances in knowledge to design and construction of structures; *areas of study inc*: space structures; structural design; computer methods; structural mechanics; stability of structures; dynamics of structures; matrix methods; foundation eng; exptl stress analysis; structural materials; adv finite element methods; formex methods; lab and project work. Contact Dr H Nooshin

92:98 Wales (Cardiff), *Civil and structural engineering*, MSc, 1 yr f-t: 3 yrs p-t; adv training in theory and practice of civil eng; *course content*: inc finite element method, adv mechanics, analysis and design of steel structures, limit state design of concrete, concrete technology, concrete and masonry structures, geotechnical eng and water resources; exam, project, dissertation. Contact Dr HR Thomas

92:99 Wales (Swansea), *Civil engineering*, MSc, 1c yr f-t; computational modelling in finite elements and eng mechanics; 6 mth course work followed by 6 mth research project; course work ranges from finite element basics to computer graphics with coverage of mechanics of structures, fls and soils, and emphasis on computer aided eng; suitable for good hons graduates in eng or applied mathematics. Contact Dr DJ Naylor

## Certificates and diplomas

92:100 Bolton IHE, *Geotechnics*, Diploma (CNA A)

92:101 Bradford, *Civil and structural engineering*, Diploma

92:102 City, *Engineering management*, Diploma

92:103 Dundee, *Structural engineering*, Diploma

92:104 Edinburgh, *Civil engineering*, Diploma

92:105 Glasgow, *Civil engineering*, Diploma

92:106 Middlesex Poly, *Geotechnics*, Diploma (CNA A)

92:107 Newcastle, *Engineering hydrology*, Diploma

2:108 Newcastle, *Structural engineering*, Diploma/Certificate

2:109 NE London Poly, *Civil engineering*, Diploma

2:110 Paisley CT, *Engineering design of buildings*, Diploma

92:111 Wales (Swansea), *Civil engineering*, Certificate

# IMPERIAL COLLEGE

(UNIVERSITY OF LONDON)

## offers MSc Courses in

Concrete Structures, Engineering Hydrology, Public Health Engineering, Soil Mechanics, Soil Mechanics & Engineering Seismology, Structural Steel Design, Timber Technology (Timber Structures & Wood Protection) and Transport. For all of these courses SERC or NERC awards are available. For details of our extensive research opportunities, please see *Graduate Studies*.

Details from The Registrar, Imperial College, London SW7 2AZ

Details of shorter courses from The Head of the Civil Engineering Dept  
Imperial College London SW7 2BU

## ASTON UNIVERSITY

### Department of Civil Engineering

Opportunities exist for graduates with good honours degree qualifications in civil engineering and for those with relevant backgrounds in a number of other subjects such as chemistry, materials, geology, physics, mathematics or computing to pursue research leading to a PhD or MPhil.

The major research groups in the Department are in the fields of

**Materials** (Chemistry and technology of cements, Durability of reinforced concrete, Corrosion and protection of metals, Fire behaviour of structural materials, Exploitation of waste materials, Soil freezing phenomena, Computer simulation of mechanics of particulate materials)

**Systems and Remote Sensing** (Software development for satellite image processing, Pattern recognition, Artificial Intelligence, Geodata bases, Application of remote sensing to earth and environmental sciences, to land and water resources and to civil engineering and hydrology)

Individual research is also carried out in the fields of structural design, design and construction, transport planning and construction management.

Further Information may be obtained from  
Postgraduate Admissions Tutor, Department of Civil Engineering

ASTON UNIVERSITY  
Aston Triangle, Birmingham B4 7

- project management, finite elements, properties of materials; assessment by exam and dissertation. Contact Professor PA Thompson or Dr TE Taylor
- 92:83 Newcastle, *Engineering hydrology*, MSc
- 92:84 Newcastle, *Hydraulic engineering*, MSc
- 92:85 Newcastle, *Soil mechanics and foundation engineering*, MSc
- 92:86 Newcastle, *Structural engineering*, MSc
- 92:87 Nottingham, *Engineering surveying*, MSc
- 92:88 Poly of Wales, *Civil engineering*, MSc (CNA)
- 92:89 Sheffield, *Civil and structural engineering*, MEng
- 92:90 Southampton, *Advanced structural engineering*, MSc/Diploma
- 92:91 Southampton, *Irrigation engineering*, MSc/Diploma
- 92:92 Southampton, *Soil conservation and land reclamation engineering*, MSc/DUS
- 92:93 Strathclyde, *Hydraulics, hydrology and coastal dynamics*, MSc/Diploma
- 92:94 Strathclyde, *Structural engineering*, MSc/Diploma
- 92:95 Surrey, *Bridge engineering*, MSc/Diploma
- 92:96 Surrey, *Geotechnical engineering*, MSc/Diploma, 2 yrs p-t; intended for practising civil engineers and eng geologists from consultancies, contracting and local authorities; *areas of study inc*: eng properties of soils, critical state soil mechanics, site investigation, foundation eng, slope and embankment stability, eng geol and rock mechanics, adv lab testing techniques with emphasis on application to practical problems, seepage and groundwater control, design and construction of earth dams, field instrumentation, earth retaining structures, computer soln of geotechnical problems, geotechnical processes, soil mechanics aspects of motorway and airfield construction; lab work, project and dissertation. Contact Dr CRI Clayton
- 92:97 Surrey, *Structural engineering*, MSc/Diploma, 1c yr f-t; 2 yrs p-t; intended mainly for practising civil engineers, also useful for research workers; aims to help engineers to apply latest advances in knowledge to design and construction of structures; *areas of study inc*: space structures; structural design; computer methods; structural mechanics; stability of structures; dynamics of structures; matrix methods, foundation eng; exptl stress analysis; structural materials; adv finite element methods, formex methods; lab and project work. Contact Dr H Nooshin
- 92:98 Wales (Cardiff), *Civil and structural engineering*, MSc, 1 yr f-t; 3 yrs p-t; adv training in theory and practice of civil eng, *course content inc* finite element method, adv mechanics, analysis and design of steel structures, limit state design of concrete, concrete technology, concrete and masonry structures, geotechnical eng and water resources; exam, project, dissertation. Contact Dr HR Thomas
- 92:99 Wales (Swansea), *Civil engineering*, MSc, 1c yr f-t; computational modelling in finite elements and eng mechanics, 6 mth course work followed by 6 mth research project; course work ranges from finite element basics to computer graphics with coverage of mechanics of structures, fls and soils, and emphasis on computer aided eng, suitable for good hon's graduates in eng or applied mathematics. Contact Dr DJ Naylor

## Certificates and diplomas

- 92:100 Bolton IHE, *Geotechnics*, Diploma (CNA)
- 92:101 Bradford, *Civil and structural engineering*, Diploma
- 92:102 City, *Engineering management*, Diploma
- 92:103 Dundee, *Structural engineering*, Diploma
- 92:104 Edinburgh, *Civil engineering*, Diploma
- 92:105 Glasgow, *Civil engineering*, Diploma
- 92:106 Middlesex Poly, *Geotechnics*, Diploma (CNA)
- 92:107 Newcastle, *Engineering hydrology*, Diploma
- 2:108 Newcastle, *Structural engineering*, Diploma Certificate
- 2:109 NE London Poly, *Civil engineering*, Diploma
- 2:110 Paisley CT, *Engineering design of buildings*, Diploma
- 92:111 Wales (Swansea), *Civil engineering*, Certificate

# IMPERIAL COLLEGE

(UNIVERSITY OF LONDON)

## offers MSc Courses in

Concrete Structures, Engineering Hydrology, Public Health Engineering, Soil Mechanics, Soil Mechanics & Engineering Seismology, Structural Steel Design, Timber Technology (Timber Structures & Wood Protection) and Transport. For all of these courses, SERC or NERC awards are available. For details of our extensive research opportunities, please see *Graduate Studies*.

Details from: The Registrar, Imperial College, London SW7 2AZ

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Imperial College, London SW7 2BU

## ASTON UNIVERSITY

### Department of Civil Engineering

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The major research groups in the Department are in the fields of

**Materials** (Chemistry and technology of cements, Durability of reinforced concrete, Corrosion and protection of metals, Fire behaviour of structural materials, Exploitation of waste materials, Soil freezing phenomena, Computer simulation of mechanics of particulate materials)

**Systems and Remote Sensing** (Software development for satellite image processing, Pattern recognition, Artificial Intelligence, Geodata bases, Application of remote sensing to earth and environmental sciences, to land and water resources and to civil engineering and hydrology)

Individual research is also carried out in the fields of structural design, design and construction, transport planning and construction management.

Further information may be obtained from  
Postgraduate Admissions Tutor, Department of Civil Engineering

ASTON UNIVERSITY  
Aston Triangle, Birmingham B4 7ET.

## UNIVERSITY OF DUNDEE

### POSTGRADUATE OPPORTUNITIES IN CIVIL ENGINEERING

**Taught courses:** The Department offers a Diploma in Civil Engineering, a Diploma in Structural Engineering, and an MSc in Civil Engineering, all of which are awarded for the successful completion of a course of study comprising a choice of topics from a range of specialised courses. Candidates will also be required to undertake an approved design or research project.

**Research:** Research leading to the award of MSc or PhD, in a relatively small but very active department, can have many advantages in terms of contact with supervisors and other researchers, and the opportunities for interdisciplinary approaches to problems. Research groups are active in the fields of fluid dynamics, concrete technology, engineering management, and pavement engineering, and also within the Wolfson Bridge Research Unit, which is shifting its emphasis towards repair and maintenance of concrete and steel structures. Other workers are involved with aspects of structural and environmental engineering. All enquiries relating to these and other potential research areas are welcomed.

For further information contact: Prof R M W Horner  
Department of Civil Engineering  
The University  
Dundee DD1 4HN, Scotland

## UNIVERSITY OF LIVERPOOL

Department of Civil Engineering

Structural Engineering, MSc(Eng)/Diploma

1 yr f-t: in-depth study of modern methods of analysis (with emphasis on computer based methods) and modern methods of design and construction: *syllabus:* advanced analytical methods, in particular the finite element method; foundation and geotechnical engineering; design, maintenance and repair of concrete structures; design of steel, masonry and timber structures; and advanced design theories.

Contact: Miss P Breen, Department of Civil Engineering, University of Liverpool.  
Brownlow Street, PO Box 147, Liverpool  
L69 3BX

## UNIVERSITY OF BIRMINGHAM

### Graduate Courses in the Department of Civil Engineering

**Construction Management, MSc (Eng), 1 c yr f-t;** provides a grounding in the main disciplines and techniques of practical use in the management and implementation of heavy construction engineering projects, and a more fundamental understanding of the social, economic framework within which civil engineering takes place. Taught modules cover construction financial management, the contract system, site engineering technology, and numerical research techniques. Industrial seminars and site visits are included. Workshops aim to develop management and communication skills. A personal research project is undertaken.  
(Recognised by SERC for adv course studentships)

**Foundation Engineering, MSc (Eng), 1 c yr f-t;** provides a detailed study of the theory and foundation engineering. Lectures cover physical and mechanical properties of soils, site investigation and laboratory testing, engineering geology, slope stability, foundations and earth construction, earthworks, embankment dams, and ground improvement techniques. Site visits, and personal research project plus 10 weeks industrial training or longer.

by SERC for adv course studentships)

**Resources Technology, MSc (Eng) 1 c yr f-t: max 3 yrs p-t;** provides an integrated appreciation of the range of activities involved in the optimal design and operation of water resource systems. Taught modules cover: basic aspects, technological aspects, design and operational aspects, and environmental aspects. A group management project and an individual industrially-based project complete the course.  
(Recognised by NERC for adv course and industrial studentships)

Civil Engineering research degrees (MPhil (Eng), PhD) may be undertaken in all main areas.

**The City  
University**

**Queen Mary  
College**  
University of London

## **MSc in Water Resources Engineering**

**A broad-based course aimed at engineers and  
managers for the water industry**

The course may be studied full-time over one calendar year or  
part-time by attending one day per week over three years. Both

options are available. The course is designed to provide a broad-based education in the water resources engineering field. It covers the following areas: **Hydrology, Water Resources Engineering, Water Quality, Water Distribution, Water Treatment, and Water Pollution Control.** The course is aimed at engineers and managers in the water industry who wish to develop their knowledge and skills in the water resources engineering field. The course is designed to provide a broad-based education in the water resources engineering field. It covers the following areas: **Hydrology, Water Resources Engineering, Water Quality, Water Distribution, Water Treatment, and Water Pollution Control.**

Mr P Burhouse, Department of Civil Engineering,  
University, Northampton Square, London EC1V 0HB  
Tel: 01 253 4399 ext 3601/3640

or  
Dr J R Williams, Department of Civil Engineering, Queen  
Mary College, Mile End Road, London E1 4NS  
Tel: 01 980 4811 ext 4306

**UNIVERSITY  
of SALFORD**

## **MSc/PhD: Civil Engineering Quantity and Building Surveying Environmental Sciences**

Supervision available. Current research areas: structures,  
stressed skin design and frameless structures, composite steel  
sheet/concrete floors and flat slabs, light gauge steel  
members and frames, concrete and cementitious materials,  
hydraulics, small scale hydroelectric plant, engineering  
hydrology, marine structures and sea defence works, tidal  
channel phenomena, soil mechanics.

The course is designed to provide a broad-based education in the civil engineering field. It covers the following areas: **Structures, Stressed Skin Design, Frameless Structures, Composite Steel Sheet/Concrete Floors, Flat Slabs, Light Gauge Steel Members and Frames, Concrete and Cementitious Materials, Hydraulics, Small Scale Hydroelectric Plant, Engineering Hydrology, Marine Structures and Sea Defence Works, Tidal Channel Phenomena, Soil Mechanics.** The course is aimed at engineers and managers in the civil engineering field who wish to develop their knowledge and skills in the civil engineering field. The course is designed to provide a broad-based education in the civil engineering field. It covers the following areas: **Structures, Stressed Skin Design, Frameless Structures, Composite Steel Sheet/Concrete Floors, Flat Slabs, Light Gauge Steel Members and Frames, Concrete and Cementitious Materials, Hydraulics, Small Scale Hydroelectric Plant, Engineering Hydrology, Marine Structures and Sea Defence Works, Tidal Channel Phenomena, Soil Mechanics.**

Further information from: Dr P R Brookes, Administrative  
Officer, Department of Civil Engineering, University of  
Salford, Salford M5 4WT. Telephone 061 736 3843 ext 7125



## 93 Engineering: control and systems

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 93:1 Bath, Electrical engineering, MSc/PhD**  
**93:2 Birmingham, Electronic and electrical engineering, MSc/PhD**  
**93:3 Bradford, Control engineering, MPhil/PhD**  
**93:4 Brighton Poly, Computing and cybernetics, MPhil/PhD (CNA)**  
**93:5 Brunel, Engineering, MPhil/PhD**  
**93:6 City, Electrical engineering and applied physics, MPhil/PhD**  
**93:7 City, Systems science, MPhil/PhD;** supervision available, current research inc: *systems science programme*: fundamental studies and gen systems (epistemology and ontology of systems science, structural modelling, systems methodologies for problem solving), measurement and information in medicine (math modelling, clinical measurement, control system based computer models for medical diagnosis, decision making and patient management, expert systems in medicine), analysis of political systems (dynamics of conflict, policy research, political ideology and communications), rehabilitation systems (policy analysis, modelling of effects of disabilities on employment, computer-based aids); *systems eng and management programme*: systems design (whole-life design methodology, cost-effectiveness evaluation, technology assessment, system reliability, safety and logistics), decision support systems (risk analysis and eng, structural modelling, multiple criteria with conflict, computer-aided interactive management), technological change (policy analysis, portfolio analysis, dynamics of technological change, techno-econ forecasts). Contact Professor ER Carson  
**93:8 Coventry (Lanchester) Poly, Systems and control, MPhil/PhD (CNA)**  
**93:9 Durham, Engineering science, MSc/PhD**  
**93:10 Huddersfield Poly, Systems, MPhil/PhD (CNA)**  
**93:11 Lancaster, Systems, MPhil/PhD**  
**93:12 Leicester, Control and computer engineering, MPhil/PhD**  
**93:13 Liverpool Poly, Electrical and control engineering, MPhil/PhD (CNA)**  
**93:14 London (Imperial), Control systems, MPhil/PhD;** supervision available in Dept of Electrical Eng, research interests in following fields: development of control theory, industrial and econ applications, CAD and graphics, computer control, adaptive control; current research topics inc: stochastic control and filtering, optimisation and optimal control, linear system theory, large-scale systems, industrial control, economics, CAD of control systems, communications networks. Contact Professor MHA Davis  
**93:15 Manchester, Control and systems engineering, MSc/PhD**  
**93:16 Manchester (UMIST), Control systems, MSc/PhD;** supervision available, collaboration between Control Systems Centre and Depts of Chem, Electrical and Mechanical Eng, Metallurgy, Maths, Computation, Building, and Polymer and Fibre Science; major research topics inc: multivariable control theory, complex systems theory, interactive computer-aided analysis, design and on-line simulation of control systems, identification, adaptive and self-tuning control, computer control, machine tool control and robotics, servo systems, process control, control of automotive engines, boiler systems, steelmaking, lift system control and simulation; facilities inc labs for teaching and research on control systems and components, assoc depts have labs and eqpt for work on relevant control problems (eg several pilot plants under computer control, paper-making machine, labs for automotive power plant and machine tool and robotics studies). Contact Dr PA Cook  
**93:17 Open, Systems, BPhil/MPhil/PhD**  
**93:18 Reading, Cybernetics, MPhil/PhD;** supervision available, research interests: acquisition of information: instrument physics and chem, fundamental limits to measurement, instrumentation and measurement; *transmission and storage of information*: information and coding theory, analog-

digital conversion magnetic recording telecommunications transformation of information

Dr MJ Usher (Course Tutor)

- 93 19 Salford, *Electronic and electrical engineering*, MSc/PhD  
 93 20 Sheffield, *Control engineering* MEng/MScTech/PhD  
 93 21 Sheffield City Poly, *Electrical and electronic engineering* MPhil/PhD (CNAAB)  
 93 22 Southampton, *Electronics and information engineering*, MPhil/PhD  
 93 23 Southampton, *Mechanical engineering*, MPhil/PhD  
 93 24 South Bank Poly, *Electrical and electronic engineering*, MPhil/PhD (CNAAB)  
 93 25 Strathclyde, *Electronic and electrical engineering* MSc/PhD  
 93 26 Sunderland Poly, *Electrical, electronic and control engineering*, MPhil/PhD (CNAAB)  
 93 27 Surrey, *Electronic and electrical engineering*, MPhil/PhD  
 93 28 Surrey, *Mechanical engineering* MPhil/PhD  
 93 29 Sussex, *Control and electrical engineering*, MPhil/DPhil  
 93 30 Teesside Poly, *Electrical, instrumentation and control engineering* MPhil PhD (CNAAB)  
 93 31 Walsley Poly, *Electrical and electronic engineering* MSc/PhD  
 93 32 Walsley Poly, *Electrical and electronic engineering* MSc/PhD  
 93 33 Walsley Poly, *Electrical and electronic engineering* MSc/PhD

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 93 34 Bradford, *Control engineering*, MSc  
 93 35 Brighton Poly, *Information systems*, MSc  
 93 36 Brunel, *Digital systems*, MSc/Diploma  
 93 37 Brunel, *Intelligent systems*, MSc  
 93 38 —  
 93 39 —  
 93 40 —  
 93 41 —  
 93 42 —  
 93 43 —  
 93 44 —  
 93 45 —  
 93 46 —  
 93 47 Hatfield Poly, *Integrated circuit and system design* MSc/Diploma (CNAAB)  
 93 48 Hull Poly, *Electrical and electronic engineering* MSc/PhD

filtering digital signal processing incremental computing stochastic systems structured programming algorithm development data management system software computer graphics dissertation for MSc Contact Postgraduate Tutor

- 93 49 Lancaster, *Information management* MA  
 93 50 Lancaster, *Systems in management*, MA  
 93 51 London (Imperial), *Control systems* MSc/DIC 1c yr ft syllabus mod deterministic control theory state space analysis of linear systems optimal control and stability algorithms for optimal control mod stochastic filtering and control theory probability and stochastic processes filtering and control of linear stochastic processes stats and identification of linear dynamical systems

*classical control*: classical control theory, sampled data and nonlinear systems; *computational techniques*: numerical methods and algorithms for CAD, function optimisation; *computing and computer control*: software for on-line control, hardware for on-line control, control applications of microprocessors; *control system design*: design of linear multivariable control systems; *modelling*: modelling and simulation of dynamical systems; optional research courses; coursework assessment, exam, dissertation (SERC). Contact Professor MHA Davis

**93:52 Loughborough, *Mathematics of modern control systems*, MSc**

**93:53 Manchester, *Systems design*, MSc**

**93:54 Manchester (UMIST), *Systems and control*, MSc/Diploma, 1 yr f-t; organised by Control Systems Centre in collaboration with other depts; *course inc*: linear systems analysis, probability theory, modelling, classical and sampled-data control, nonlinear dynamical systems, simulation for control, optimisation and numerical analysis, design criteria, multivariable control, system identification, complex systems, estimation and filtering; *sp subjs from*: robotics and machine tool control, human factors in control systems, process control systems, self tuning control, control of propulsion systems, learning systems (SERC). Contact Dr PA Cook**

**93:55 Middlesex Poly, *Integrated circuit and system design*, MSc/Diploma (CNAAB)**

**93:56 Newcastle, *Applied control engineering*, MSc**

**93:57 NE London Poly, *Engineering of dynamic systems*, MSc (CNAAB)**

**93:58 Portsmouth Poly, *Control technology*, MSc/Diploma (CNAAB)**

**93:59 Salford, *Electronic control engineering*, MSc/Diploma**

**93:60 Sheffield, *Control systems/information technology*, MEng**

**93:61 Strathclyde, *Digital systems*, MSc**

**93:62 Sunderland Poly, *Control engineering and computer systems*, MSc/Diploma (CNAAB)**

**93:63 Surrey, *Systems engineering*, MSc/Diploma**

**93:64 Wales (UWIST), *Systems engineering*, MEng**

**93:65 Warwick, *Manufacturing systems engineering*, MSc See page 446**

## **Certificates and diplomas**

**93:66 Poly of Central London, *Electronics and computer technology*, Diploma**

## **UNIVERSITY OF WARWICK**

### **POSTGRADUATE STUDIES IN ENGINEERING**

*Research opportunities (MSc/MPhil/PhD)  
within active groups*

**COMPUTER SYSTEMS and  
INFORMATION TECHNOLOGY**

**CIVIL ENGINEERING**

**ELECTRONICS**

**MATERIALS**

**CONTROL SYSTEMS and**

**BIOENGINEERING**

**MANUFACTURING**

**MECHANICAL ENGINEERING**

*(Some SERC Studentships available)*

*Further details from*

**Dr N Storey, Research Admissions Tutor,  
Department of Engineering University of  
Warwick, Coventry CV4 7AI, England**

## **Addresses of institutions**

**are on pages  
479-508**

## 94 Engineering: electrical and electronic

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 94:1 Aston, Electrical and electronic engineering, MPhil/PhD**
- 94:2 Bath, Electrical engineering, MSc/PhD;** supervision available, current research activities inc: *electronics gp*: optical electronics; microwaves and millimetre waves; land mobile radio; multiplexing technology; radio transmitters; digital signal processing; speech processing; digital logic design; *power and control gp*: ground transport systems; power electronics and machine control; studies of power system stability; disc machines; mod control techniques; power generation, transmission and distribution systems; transistor commutated motors; medical electronics; microprocessor systems; computation of e-m fields. Contact JKM MacCormac
- 94:3 Belfast, Electrical and electronic engineering, MSc/PhD**
- 94:4 Birmingham, Electronic and electrical engineering, MSc/PhD**
- 94:5 Birmingham Poly, Electrical engineering, MPhil/PhD (CNAA)**
- 94:6 Bradford, Electrical and electronic engineering, MPhil/PhD**
- 94:7 Brighton Poly, Electrical and electronic engineering, MPhil/PhD (CNAA)**
- 94:8 Bristol, Electrical and electronic engineering, MSc/PhD**
- 94:9 City, Electrical engineering and applied physics, MPhil/PhD;** supervision available, current research inc: *control eng*: on-line computer control, mathematical modelling and parameter estimation of industrial processes; hierarchical control of large scale systems; control of large scale production scheduling systems; integrated system optimisation and parameter estimation; modelling and control of robot manipulators; multivariable control theory; *measurement and instrumentation*: instrumentation using pattern recognition and signal image processing, math modelling and CAD of instruments, ultrasonic instrumentation, optical instrumentation, design research and fundamental studies, electrical metrology; *information eng*: digital signal processing and digital-filtering; microprocessors, software eng; software development methods and tools; theory of pseudorandom signals; digital communications and communications on local-area computer networks; optimal routing of information flows; *measurement and information in medicine*: model-based measurement for estimation of physiol and clinical parameters, math modelling of physiol systems, decision making and patient management, interactive models for clinical application; *electrical and electronic eng*: high coltage eng, electromagnetic compatibility studies, electrical power and energy systems; *applied physics*: materials analysis, molecular medicine. Contact Dr KTV Grattan, Senior Tutor, Research
- 94:10 Coventry (Lanchester) Poly, Electrical and electronic engineering, MPhil/PhD (CNAA)**
- 94:11 Cranfield, Molecular electronics, MSc/PhD**
- 94:12 Dundee, Electrical engineering and electronics, MSc/PhD**
- 94:13 Durham, Applied physics and electronics, MSc/PhD**
- 94:14 Durham, Engineering science, MSc/PhD**
- 94:15 Edinburgh, Electrical engineering, MPhil/PhD**
- 94:16 Essex, Electronic engineering, MSc/MPhil/PhD**
- 94:17 Essex IHE, Telecommunication systems, MPhil/PhD (CNAA)**
- 94:18 Glasgow, Electrical engineering, MSc/PhD;** supervision available; *areas of research inc*: integrated optical devices and systems; very high resolution electron beam and x-ray lithography; molecular beam epitaxy of III-V semiconductor cpds; development of improved governors for hydro-electric generators; microprocessors for power system control and simulation; distributed microprocessor organisations; efficiency of hydraulic machines by thermometric method; pattern recognition applied to analysis of pulmonary sounds and to non-destructive testing; physiol system identification; helicopter system identification; multivariable techniques for helicopter flight control; semiconductor device modelling; low dimensional structures, quantum wells and superlattices;

analogue VLSI systems CAD techniques for analysis design and optimisation of switched capacitor and continuous time networks bio-electronics cellular automata Contact Professor DJ Murray Smith

94 19 Heriot Watt, *Electrical and electronic engineering*, MSc/PhD

94 20 Huddersfield Poly, *Electrical and electronic engineering* MPhil/PhD (CNA)

94 21 Hull, *Electronic engineering*, MSc/PhD supervision available major interest in robot research specialities inc vision guided assembly multiprocessor sensory systems adv gripper design etc other major research areas VLSI and CAD microwave and HF communications signal processing and image analysis electromagnetics control and instrumentation facilities inc VAX 750 computer SERC interactive graphics terminals DEC and Hewlett Packard minicomputers microcomputers and microprocessor development systems Contact Professor A Pugh

94 22 Kent, *Electronics* MSc/PhD See page 420

94 23 Kingston Poly, *Electrical and electronic engineering*, MPhil/PhD (CNA)

94 24 Lancashire Poly, *Electrical and electronic engineering* MPhil/PhD (CNA)

94 25 Leeds, *Electrical and electronic engineering*, MPhil/PhD

94 26 Leicester, *Electrical and electronic engineering* MPhil/PhD

94 27 Leicester Poly, *Electronic and electrical engineering*, MPhil/PhD (CNA)

94 28 Liverpool, *Electrical engineering and electronics* MEng/PhD supervision available range of research topics digital signal processing radio communications microprocessor applications robotics microelectronics solid state devices and circuits gas discharges and arc research power systems and machines Contact Professor JD Parsons

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power systems interactive use of computers for power system analysis *e m fields* application of *e m* theory to electrical machines, *eng applied to medicine* analysis of biol signals for purposes of clinical and physiol research *information eng* switched-capacitor filter theory and design

interpolation and decimation *solid state electronics* semiconductors in amorphous and polycrystalline forms Contact Professor DQ Mayne

94 31 London (KQC), *Electronic and electrical engineering*, MPhil/PhD supervision available research interests inc physical electronics optical fibre sensors non linear optics optical signal processing electron physics numerical investigations of noise in crossed field devices high freq noise as stochastic problem gyrotron and cyclotron resonance devices quantum electronics photon stats applications solid state optical detectors and signal processing devices power semiconductor devices fabrication of MIS devices in silicon indium phosphide and gallium arsenide using

and software for minicomputer and microprocessor systems computer input and output devices graphical systems *cybernetics* definition of invariance and generalised homeostasis in cybernetic systems notion of time in cybernetics problems in design of cybernetic machines for retrieval of useful information from database created from textual input Contact Professor AJ Rogers

94 32 London (Queen Mary), *Electrical and electronic engineering* MPhil/PhD

94 33 London (UC), *Electronic and electrical engineering* MPhil/PhD supervision available in following research fields VLSI design digital signal processing reliability and fault tolerant computing opto-electronics inc fibre optic components and instrumentation integrated optics and digital optics for optical communication systems materials growth and fabrication technology inc thin film work and laser processing for microelectronics bioelectronics inc biosensors and control systems for biotechnology acoustic and optical microscopy for non-destructive testing and medical applications microwave and radar techniques inc antennas phased array antennas and microwave components microwave and millimetre atm propagation computer modelling of optical and acoustic fields robotics Contact Dr G Parry

**94:34 Loughborough, *Electronic and electrical engineering*, MSc/MTech/PhD**

**94:35 Manchester, *Electrical engineering*, MSc/PhD;** supervision available for research, interests inc: *electronics and microelectronics*: electron-beam lithography for microcircuit fabrication, uncommitted logic array, customisation and CAD, applications of microprocessors, radar data processing, magnetic bubble and magneto-optic memory devices, magneto-resistive sensors; *digital communications*: error-control coding systems, modulation and detection methods, spread spectrum techniques, digital signal processing, fibre-optic systems; *physical electronics*: molecular-beam epitaxy of cpd semiconductors, vapour-phase epitaxy of II-VI cpds for light-emitting diodes, photoluminescence and electrochem profiling studies; *measurement*: fibre-optic and piezo-electric transducers and instrumentation systems; *electrical machines*: linear synchronous motors and magnetic suspensions for transport systems, extremely high-speed motors, stabilisation schemes for variable-reluctance and hybrid permanent-magnet stepping motors; *power systems and high voltage eng*: transient performance of large interconnected networks under fault conditions, digital techniques for over-current protection; *control and systems eng*: see Engineering: control and systems. Contact Dr W Clegg

**94:36 Manchester (UMIST), *Electrical engineering and electronics*, MSc/PhD**

**94:37 Manchester Poly, *Electrical and electronic engineering*, MPhil/PhD (CNA A)**

**94:38 Newcastle, *Electrical and electronic engineering*, MSc/PhD;** supervision available, research interests inc: very large-scale integration, development of CAD tools for VLSI design; design of VLSI systems; *communication systems*: operation, analysis and synthesis of microprocessor based systems and applications in eng; optical measurements and communication devices; *microwave power studies*: dielectric power transmission, high power microwave components; *control systems*: data sampling control systems, design of digital servomechanisms inc logic and motor drive circuits; *electrical machines*: determination of machine parameters by freq response and other methods; *h-v dielectric studies*: influence of size on dielectric properties of electrical insulation and low temp h-v pulse generation and monitoring; *power systems*: transient and dynamic behaviour of synchronous power systems inc single and multi-machine studies into effects of generator parameters; *electromedical*. Contact Dr G Russell

**94:39 Newcastle Poly, *Electrical engineering and physical electronics*, MPhil/PhD (CNA A)**

**94:40 NE London Poly, *Electrical and electronic engineering*, MPhil/PhD (CNA A)**

**94:41 N Staffs Poly, *Electrical and electronic engineering*, MPhil/PhD (CNA A);** supervision available for research; recent interests inc: medical electronic instrumentation, digital techniques applied to electromechanical systems, microprocessors and applications, computer graphics, voltage and current surge measurements, telecommunications systems, power systems eng, high voltage DC transmission, control systems, semi-custom integrated circuit design; specific projects in progress: design of control strategies for glass conditioning, design of uncommitted logic array-based digital signal processors, design of intelligent serial data highway interface, thoracic impedance variability and defibrillator design, speech processing strategies for cochlear stimulation, design of high voltage DC power systems, application of series and shunt reactive compensation in AC railway systems, prediction and control of power system harmonics, CAD of protective schemes for industrial power systems. Contact KM Abbott

**94:42 Nottingham, *Electrical and electronic engineering*, MPhil/PhD**

**94:43 Open, *Electronics*, BPhil/MPhil/PhD**

**94:44 Paisley CT, *Electrical and electronic engineering*, MPhil/PhD (CNA A)**

**94:45 Plymouth Poly, *Communication engineering*, MPhil/PhD (CNA A);** supervision available for research; interests in satellite communications, terrestrial communications, digital and analogue signal processing, information theory. Contact Academic Registrar

**94:46 Plymouth Poly, *Electrical and electronic engineering*, MPhil/PhD (CNA A);** supervision available for research; research interests inc: micromagnetics, design of magnetic recording heads, control system eng, power electronics, electric contact phenomena, microelectronic control, software eng, image understanding, VLSI design. Contact Academic Registrar

**94:47 Poly of North London, *Electronic and communications engineering*, MPhil/PhD (CNA A)**

**94:48 Poly of Wales, *Electrical and electronic engineering*, MPhil/PhD (CNA A);** supervision available, research interests: assets of computational methods as applied to control eng; development of new methods of instrumentation esp in medical field; microprocessor applications; power electronics systems; CAD; battery-driven electric vehicle control; medical electronics, thermal performance of silicon circuits, pattern recognition and vision systems, speech synthesis/analysis, mobile radio. Contact PA Wittins

**94:49 Portsmouth Poly, *Electrical and electronic engineering*, MPhil/PhD (CNA A)**

**94:50 Reading, *Engineering*, MPhil/PhD**

- 94 51 Salford, *Electronic and electrical engineering*, MSc/PhD  
 94 52 Sheffield, *Electronic and electrical engineering* MEng/MScTech/PhD, supervision available in following areas antennas microwaves ultrasound image processing SERC grant for microwave and millimetre wave imaging image enhancement and display holographic systems antennas

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- 94 53 Sheffield City Poly, *Electrical and electronic engineering* MPhil/PhD (CNAAB)  
 94 54 Southampton, *Electrical engineering* MPhil/PhD  
 94 55 Southampton, *Electronics and information engineering* MPhil/PhD  
 94 56  
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 94 58  
 94 59 Surrey, *Electronic and electrical engineering*, MPhil/PhD  
 94 60 Sussex, *Control and electrical engineering*, MPhil/DPhil  
 94 61 Sussex, *Electronic engineering and computer science*, MPhil DPhil See page 422  
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 94 72  
 94 73 Warwick, *Electronics* MPhil/PhD  
 94 74 West Glamorgan IHE (Swansea), *Electronic engineering*, MPhil/PhD (CNAAB)  
 94 75 Wolverhampton Poly, *Electrical and electronic engineering*, MPhil/PhD

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses

- 94 76  
 94 77 See page 418  
 94 78  
 94 79 Bradford, *Microprocessor engineering*, MSc/Diploma  
 94 80  
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 94 83 Brighton Poly, *Microprocessor technology and applications*, MSc/Diploma (CNAAB) See page 418  
 94 84 Brunel, *Microelectronic system design*, MSc/Diploma  
 94 85 City, *Information engineering*, MSc/Diploma



- 94:86 Coventry (Lanchester) Poly**, *Electronic graphics*, MA/Diploma (CNAAB)
- 94:87 Cranfield**, *Electronic engineering*, MSc
- 94:88 Cranfield**, *Electronics (digital systems)*, MSc
- 94:89 Cranfield**, *Industrial electrical systems*, MSc
- 94:90 Cranfield**, *Telecommunications*, MSc
- 94:91 Durham**, *Electronics*, MSc, 13 mths f-t; training in integrated circuit design for students who are unable to meet entry reqs of MEng below through lack of industrial sponsorship or less approp 1st deg; *term 1*: coursework and practical projects designed to provide satisfactory entry to MEng coursework from Jan; *terms 2 and 3*: as MEng, final project may be undertaken in univ or in govt or industrial lab (SERC). Contact Dr RK Taylor
- 94:92 Durham**, *Engineering (microelectronics)*, MEng, 13 mths f-t; option in microelectronics within MEng, course centred on integrated circuit design; *compulsory*: LSI circuits and systems, digital systems, integrated circuit design techniques, management studies; *options from*: computer control of industrial processes, electronic materials technology, electronic processes in device semiconductors, microprocessor systems, LSI in communications, robotics, production control and manufacturing systems, adv management studies; design activity incorporates interactive CAD design of MSI or LSI n-MOS or CMOS chip which is manufactured and tested; 2 periods in industrial projects; see also Engineering: general (SERC). Contact Dr RK Taylor
- 94:93 Edinburgh**, *Design and manufacture of microelectronic systems*, MSc/Diploma
- 94:94 Essex**, *Electrical engineering*, MSc
- 94:95 Essex**, *Lasers and their applications*, MSc/Diploma, 9 mths f-t (hons deg in physics or related subj inc eng req); coursework, lab work, 5 1-week laser workshop courses with visiting specialists, visits to govt and industrial labs; assessment of coursework and exams (SERC). Contact Dr P Townsend
- 94:96 Essex**, *Telecommunication systems*, MSc, 9 mths f-t: 2 yrs p-t (for industrially-based engineers) or 1 yr sandwich with project in industry, univ research lab or at ENST/ESIEE (Paris) or Technical Univ of Karlsruhe; training for telecommunications industry or operating organisations or foundation deg for research work; all aspects of mod telecommunications systems design; *syllabus (core courses)*: signals and systems, transmission systems, 'C' programming, probability, intro to real time systems, principles of switching systems, radio and satellite communications, digital information transmission; plus options in radio propagation, optical communication, mobile radio communication systems, digital signal processing, secure data communications, queues and queueing networks, speech communication systems, visual communication systems, CAD for VLSI; communications and software labs, project, seminars (SERC). Contact Derek Dawes, Admissions Officer
- 94:97 Essex**, *Telematics*, MSc
- 94:98 Glasgow**, *Optical information technology*, MSc/Diploma, 1 yr f-t: 2c yrs p-t (MSc), 1 yr f-t (Diploma) (hons deg in science or eng preferred); *course content*: physical and optical electronics, communication theory, optical transmission systems, integrated optics, optical signal processing; plus for MSc industrially-orientated research project. Contact Dr JM Arnold
- 94:99 Heriot-Watt**, *Electrical power engineering*, MSc/Diploma
- 94:100 Kent**, *Electronics*, MSc/Diploma
- 94:101 Liverpool**, *Microelectronics systems and telecommunications*, MEng, 1 yr f-t or 2 yr p-t; course inc adv studies in microprocessor and digital electronics, telecommunications, integrated circuit design and related topics; projects normally assoc with these areas (studentships available, also salaried posts from industry for suitable candidates, covering period of course and after). Contact Professor JD Parsons
- 94:102 London (Imperial)**, *Communication engineering*, MSc/DIC, 1 yr f-t; *course content*: communication and switching systems, software eng, probability theory and stochastic processes, principles of communication systems, intro to analogue and digital signal processing; *choice from: communication systems*: software eng and real-time systems, switching systems, digital communication systems, traffic eng and queueing, communication networks and ISDN, optical communication, propagation techniques; *digital communication and signal processing*: software eng and real-time systems, adv digital communications, digital communication systems, coding theory, adv filtering and signal processing, detection and estimation theory, propagation techniques; assessment of coursework, dissertation (SERC). Contact Dr RA King
- 94:103 London (Imperial)**, *Electrical engineering*, MSc; joint course, see London (KQC); specialised teaching at London (Imperial) in electrical power systems (transient stability and modelling techniques for power systems, electricity economics and power system planning, system over-voltages and transmission design). Contact Dr BJ Cory

- 94:104 London (KQC), *Digital electronics*, MSc
- 94:105 London (KQC), *Electrical engineering*, MSc
- 94:106 London (Queen Mary), *Electrical engineering*, MSc
- 94:107 London (UC), *Electrical engineering*, MSc
- 94:108 Loughborough, *Digital communication systems*, MSc, 1c yr f t max 4 yrs p-t (hons deg or equiv qual in electrical eng electronic eng or physics req) aims to give thorough knowledge of basic principles of different systems and techniques and ability to design and develop next generation of digital communication systems, course concerned with theory and techniques involved in transmission of digital data over channels that produce both noise and distortion digital coding of
- 94:109 normally inc electronic circuit techniques and digital electronics device physics and characteristics, control theory, instrumentation and analysis of switching circuits AC/DC conversion AC load control and HVDC transmission uses of forced commutation electrical machine control project Contact Dr CD Manning
- 94:110 Manchester, *Instrument design and application*, MSc 1 2c yrs f t 2 yrs p-t min (hons deg or equiv in a science or technology sub req), interdisciplinary training for career in eg aerospace instrumentation, process instrumentation biomedical instrumentation instrument production *course content* design of transducers and their assoc electronic circuits application of computers in instrumentation, multivariable measurement analysis noise reduction and signal recovery elements of instruments, metrology, display devices, design and research projects exam design project and research dissertation (SERC) Contact Dr W Clegg
- 94:111 " " "
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- 94:115 " " "
- 94:116 Manchester (UMIST), *Microprocessor engineering and power electronic control*, MSc/Diploma
- 94:117 Manchester (UMIST), *Power systems engineering*, MSc/Diploma
- 94:118 Manchester Poly, *Physical measurement techniques and instrumentation*, MSc (CNAAB)
- 94:119 Middlesex Poly, *Microelectronics engineering*, MSc/Diploma (CNAAB)
- 94:120 Nottingham, *Modern electronics*, MSc
- 94:121 Oxford, *Science and application of electric plasmas*, MSc
- 94:122 Poly of Central London, *Digital systems and instrumentation*, MSc/Diploma (CNAAB)
- 94:123 Poly of Central London, *Microelectronics and communication systems*, MSc (CNAAB)
- 94:124 Poly of Central London, *Software engineering*, MSc (CNAAB)
- 94:125 Portsmouth Poly, *Signal processing*, MSc/Diploma (CNAAB)
- 94:126 Salford, *Electronic control engineering*, MSc/Diploma
- 94:127 Southampton, *Electrochemical science*, MSc
- 94:128 Southampton, *Microelectronics systems design*, MSc See page 420
- 94:129 South Bank Poly, *Information systems engineering*, MSc/Diploma (CNAAB)
- 94:130 Stirling, *Software engineering*, MSc
- 94:131 Strathclyde, *Electrical power engineering*, MSc
- 94:132 Surrey, *Microelectronics and automatic control*, MSc/Diploma
- 94:133 Surrey, *Microelectronics, microprocessor and computer engineering*, MSc/Diploma
- 94:134 Surrey, *Satellite communication engineering*, MSc
- 94:135 Wales (Bangor), *Ocean electronics*, MSc/Diploma
- 94:136 Wales (Cardiff), *Electrical and electronic engineering, computer systems*, MSc/Diploma

## Certificates and diplomas

- 94:137 **Belfast**, *Information engineering*, Diploma  
94:138 **Birmingham Poly**, *Microelectronics and computer technology*, Diploma  
94:139 **Bradford**, *Electrical and electronic engineering*, Diploma  
94:140 **Bradford**, *Electrical power systems*, Diploma  
94:141 **Bradford**, *Electronics and communications engineering*, Diploma  
94:142 **Dundee**, *Electrical engineering*, Diploma  
94:143 **Dundee**, *Electrical engineering and microcomputer systems*, Diploma  
94:144 **Dundee**, *Electronic engineering*, Diploma  
94:145 **Essex**, *Telecommunication systems management*, Diploma  
94:146 **Glasgow**, *Electronics and electrical engineering*, Diploma  
94:147 **Newcastle**, *Electrical power engineering*, Diploma/Certificate  
94:148 **Poly of Wales**, *Design of microprocessor-based systems*, Diploma (CNAAB)  
94:149 **Robert Gordon's IT (Aberdeen)**, *Offshore electronic systems*, Diploma (CNAAB)  
94:150 **Strathclyde**, *Electrical power engineering*, Diploma  
94:151 **Ulster**, *Microelectronics and microcomputer applications*, Diploma

## ASTON UNIVERSITY

### Postgraduate Courses in Telecommunications Technology

The department of Electrical and Electronic Engineering offers a 12 month MSc and an 8 month Diploma Course in Telecommunications Technology. The courses have been designed in conjunction with the telecommunications industry to meet the demand for graduate training in a rapidly developing area. Some of the lectures are given by internationally acknowledged experts from the industry.

Diploma holders may subsequently carry out an approved project in industry for the award of the MSc degree.

Some SERC studentships will be available for suitably qualified home students.

Further details and brochure from:

**Dr R L Brewster**  
Postgraduate Course Tutor  
Department of Electrical  
and Electronic Engineering  
Aston University, Aston Triangle  
Birmingham B4 7ET.

Telephone: 021-359 3611 Extension 4982

## Brighton Polytechnic

### MSc/Diploma (CNAAB)

#### Microprocessor technology and applications

13 mths f-t; conversion course for  
hons grads in eng or natural sciences,  
excluding recent grads in electronic or  
computer science; *syllabus inc:*  
hardware, software, data  
communications and robotics;  
6-mth project for MSc; assessment by  
exams and dissertation (SERC)  
(new course 1985).

For further information, contact:

**The Registrar, Brighton Polytechnic,**  
**Mithras House, Moulsecoomb,**  
**Brighton BN2 4AT.**  
**Tel: (0273) 693655**

# University College London

## Department of Electronic and Electrical Engineering

## PhD/MSc

The Department Electronics has flourished here since Fleming invented the diode valve in 1889. Now within a modern well-equipped building research continues at the frontiers of electronics. Current research topics include microwave techniques, antenna design, fibre optics, optoelectronics, integrated optics, ultrasonic and optical microscopy, integrated circuit design and digital signal processing, bioelectronics, control and robotics, electronic materials and computer modelling of fields.

**Support for research activities** The research programmes in the department have attracted a wide range of support from SERC, industry and various government agencies at a level in excess of one million pounds per year. An increasing number of projects are carried out collaboratively with industry and with other universities. This includes both UK based industries and European industries. The major research programmes in the department are led by Professors D E N Davies FRS, J E Midwinter FRS and J B Davies.

**Support for research students** Most UK based students are supported by the SERC either on standard grants or on CASE awards with industry. In almost all cases an additional financial top-up is provided by an industrial organisation linked to the project. Other students, UK and overseas, receive support directly from industry or in the case of overseas students from their own governments. A large fraction of our overseas students receive ORS awards.

**Technical facilities** The department has well

recently been installed. Computing facilities include various departmental based micro-computers, systems, a faculty based PRIME computer which is part of the SLRC inter-active computing facility. The University of London has Amdahl and Cray computers.

**Publications** Research students and staff publish approximately 50 papers each year. Students are encouraged to attend conferences and frequently present papers at major national or international meetings.

**Social facilities** UCL is a multi-faculty college – the largest in the University of London. The many clubs and societies reflect the interests of students in subjects as diverse as Engineering, Egyptology and English history. The college has its own theatre and sports facilities. In addition the University of London Union facilities are a short distance away. Beyond that there is London.

**Courses** The department offers two MSc courses: one on Microwaves and Modern Optics and the other on Information Technology (in conjunction with the Department of Computer Science). The Information Technology course is a conversion course and the entry requirement is a good honours degree in any branch of science or engineering except electronics or computer science.

**Application procedure** For application form and further details please contact

Dr G Parry  
Dept Electronic and Electrical  
Engineering  
University College London  
 Torrington Place  
 London WC1E 7JF

Telephone: 01 387 7050 ext 596/572

## UNIVERSITY OF KENT AT CANTERBURY

# ELECTRONICS

### MSc/PhD

Supervision available for research. Considerable cross-collaboration with industry in research on: antennas, digital communications (including optical fibres), computers (especially artificial intelligence, small computer architecture and distributed industrial computer control, VLSI and CAD); microwave devices and propagation, network theory, electron physics, radio astronomy, solid state electronics, medical electronics.

**Further information** The Director, Electronic Engineering Laboratories, University of Kent, Canterbury CT2 7NT.

# University of Southampton

## Department of Electronics and Computer Science



### MSc in Electronics MSc in Microelectronics Systems Design

Two intensive one-year, full-time SERC-approved IT courses, tailored to equip students with the combination of skills needed for modern electronic systems. The courses emphasise practical assignments, and include an extended project. Applicants should normally have a 1st or 2nd hon degree in Electronics, Computer Science, or Maths or Physics with some Electronics, or a suitable good industrial background.

### MPhil/PhD by research

Excellent research facilities are available in most areas of electronics.

For further details, write to Mr J G Smith (MSc Admissions) or Mr T R Bartlett (Research Admissions), Department of Electronics and Computer Science, The University, Southampton SO9 5NH.

# UWIST

## University of Wales

### Postgraduate Courses One Year Full Time

#### **MSc/DIPLOMA IN ELECTRONICS** with specialisation in:

- ★ Digital Systems ★ Control Engineering
- ★ Medical Electronics ★ Communication, Radar and Navigational Aids

This course which is aimed at scientists and engineers whose first degree may not be in electronic engineering is broadly based initially with lectures in analogue and digital circuits and systems, network and field theory, microprocessors and mathematics. The latter part of the course allows specialisation in a particular area of electronics. The last four months of the course are devoted to an experimental project.

Candidates should have a degree in engineering, applied science, science or mathematics. Suitable applicants holding qualifications deemed equivalent to graduation may be admitted under a two-year scheme of candidature.

#### **M Eng IN SYSTEMS ENGINEERING** with specialisation in:

- ★ Automation and Robotics ★ Information Systems ★ Information Technology for Manufacture

A suitable combination of subject of study are chosen from the following: computer and software engineering, automatic test systems, robotics technology, data system technology, information systems, computer-aided process planning and quality control, computer-aided product design and manufacturing technology, behavioural aspects of management information systems.

This course is supported by the SERC under the Information Technology Initiative and by the Manpower Services Commission under the TOPS scheme. Candidates should have a good honours degree or equivalent in engineering, applied science or mathematics.

Graduates successfully completing the MSc or MEng may be invited to undertake a research project leading to the Doctor of Philosophy (PhD) degree.

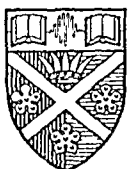
### **MSc/M Eng/PhD degrees by research**

Applications are also welcomed from suitably qualified candidates interested in undertaking a post graduate research project leading to the M Eng, MSc or PhD degrees. Applicants should have a good honours degree in science, engineering or mathematics.

*Research projects with comprehensive support facilities are available in:*

Automation and Robotics	Automated Visual Inspection	Electronic transport in semiconductors
CAD/CAM	Biomedical electronics	EHV transmission lines
Dynamic analysis	Control Systems design	High Voltage breakdown in gases
Finite element applications	Digital Pulse Compression	Thermoelectric materials
FMS	Electronic instrumentation	Photovoltaic solar cells
Information Technology for manufacture	Microprocessor applications	Semiconductor injection lasers
Production control	Microwave devices and Integrated circuits	Optoelectronics

*For further details apply to*  
**The Academic Registrar UWIST PO Box 68, Cardiff CF1 3XA**



## UNIVERSITY OF STRATHCLYDE

Department of Electronic and  
Electrical Engineering

Research projects available for PhD and MSc  
postgraduate studies in

- Design and microprocessor control of electrical machines
- High-voltage insulation, arcs and lightning
- Fundamental properties of insulating materials
- Electrical power system modelling and energy management
- Digital processing for radar signal and image analysis
- Ultrasonic imaging and NDT
- Theoretical analysis and design of industrial control systems
- Communication networks and teletraffic engineering
- Data transmission over dispersive or time variant channels
- Fibre optic sensors and signal processing and optical computers

Instructional postgraduate courses for MSc/Diploma  
are available in

- Electrical power engineering
- Information technology systems
- Business information technology systems

Further information from Prof B Culshaw, Department  
of Electronic and Electrical Engineering, University of  
Strathclyde, Royal College Building, Glasgow G1 1XW  
Tel. 041-552 4400 ext 2543

## university college of swansea

### MSc/PhD in Electrical and Electronic Engineering

University College, Swansea, is a constituent part  
of the University of Wales, and is situated in parkland,  
on the coast road west of Swansea, part way to the  
picturesque village of Mumbles and close to the  
beautiful Gower Peninsula

An active research team is working in many areas  
including solid state microelectronic fabrication,  
modelling and simulation, microprocessor-based  
electronic instrumentation, high speed data conver-  
sion, speech synthesis and recognition, topics in  
communications, including navigational and mobile  
R/T facilities, power and medical electronics, and  
CAD for control systems

Projects are available in these and other areas, and  
various grants including SERC awards may be  
available to eligible applicants

Further information may be obtained from the  
Postgraduate Admissions Adviser,  
Electrical Engineering Department,  
University of Wales, Swansea SA2 8PP

## University of Sussex

### MPhil/DPhil: Electronic, electrical, control and computer systems engineering

Opportunities exist for research in the  
following areas: computer-aided design  
and simulation of multivariable and  
nonlinear systems, identification and  
adaptive control, electromechanical  
systems and robotics, power electronics,  
direct frequency conversion, micro-  
processor control of electrical machines,  
magnetic suspension systems and their  
control, computer-aided VLSI design,  
artificial intelligence, data networks,  
display systems, multi-processor  
systems, medical applications of  
microelectronics, signal processing,  
control and biomechanics.

Further information from EEC/CS Subject Group  
Office, School of Engineering and Applied Sciences,  
University of Sussex, Falmer, Brighton BN1 9QT  
Telephone 0273 606755

## List of chapter headings and numbers

on pages  
42 and 43

## 95 Engineering: environmental and public health

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

95.1 Aston, Civil engineering and construction, MPhil/PhD

95.2 Bath, Architecture and building engineering, MSc/PhD

95.3 Brunel, Civil engineering, MSc/PhD

95.4 Brunel, Civil engineering, MSc/PhD

95.5 Brunel, Civil engineering, MSc/PhD

95.6 Brunel, Civil engineering, MSc/PhD

95.7 Brunel, Civil engineering, MSc/PhD

95.8 Lancaster, Environmental systems and analysis, management and control, MPhil/PhD

95.9 Leeds, Civil engineering, MPhil/PhD, inc public health eng. supervision available. current research interests in Dept of Civil Eng: industrial wastewater and landfill leachate treatment, fixed biomass anaerobic digesters, fundamental studies on biofloc formation and bulking in activated sludge systems, extended aeration processes, low-cost sewage treatment (inc waste stabilisation ponds), low-cost water supplies and sanitation systems for developing countries. water and wastewater microbiol. Contact Professor DD Mara

95.10 London Imperial, Civil engineering, MPhil/PhD

95.11 London Imperial, Civil engineering, MPhil/PhD

95.12 London Imperial, Civil engineering, MPhil/PhD

95.13 London Imperial, Civil engineering, MPhil/PhD

95.14 London Imperial, Civil engineering, MPhil/PhD

95.15 London Imperial, Civil engineering, MPhil/PhD

95.16 London Imperial, Civil engineering, MPhil/PhD

95.17 London Imperial, Civil engineering, MPhil/PhD

95.18 Salford, Civil engineering, MSc/PhD

95.19 Sheffield City Poly, Civil engineering, MPhil/PhD (CNA)

95.20 Southampton, Civil engineering, MPhil/PhD

95.21 South Bank Poly, Environmental science and technology, MPhil/PhD (CNA)

95.22 Strathclyde, Civil engineering, MSc/PhD

95.23 Teesside Poly, Civil and structural engineering and building, MPhil/PhD (CNA)

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

95.24 Brunel, Civil engineering, MSc

95.25 Brunel, Civil engineering, MSc

95.26 Brunel, Civil engineering, MSc

95.27 Brunel, Civil engineering, MSc

95.28 Brunel, Civil engineering, MSc

95.29 Brunel, Civil engineering, MSc

95.26 City, Water resources engineering, MSc

95.27 Cranfield, Energy and buildings, MSc

95.28 Cranfield, Energy conservation and the environment, MSc



- 95:29 Cranfield (Silsoo), *Irrigation engineering*, MSc
- 95:30 Cranfield (Silsoe), *Irrigation water management*, MSc/Diploma
- 95:31 Cranfield (Silsoo), *Soil and water engineering*, MSc/Diploma
- 95:32 Edinburgh, *Fire engineering*, MSc/Diploma
- 95:33 Glasgow, *Desalination technology*, MSc/Diploma
- 95:34 Leeds, *Environmental pollution control*, MSc, 1-2c yrs f-t (deg in physical science or eng req, other grads considered), provides fundamental understanding of causes and effects of environmental pollution with sp emphasis on methods of control of pollution, also legal and econ factors involved; coursework assessment, extended exptl project. Contact Professor A Williams
- 95:35 Leeds, *Tropical public health engineering*, MEng, 1c yr f-t; concerned with water supplies and waste disposal in developing countries; *course content*: *basic core*: lectures and coursework on low cost water supply and sanitation, urban water supply, wastewater eng, sanitary microbiol, solid waste management, irrigation eng, communications support, development economics and planning, project appraisal and management techniques, plus either dissertation or design project and long essay. Contact Professor DD Mara
- 95:36 Liverpool, *Environmental civil engineering*, MEng/Diploma, 1 yr f-t; covers analysis, planning, design and operation of civil eng infrastructure development projects and their econ and environmental impacts, both latest technological practice and appropriate technology for developing countries, *syllabus*: natural environments, applied hydrology and eng hydraulics, water resource eng, highways and transportation, environmental planning. Contact Miss P Breen
- 95:37 London (Imperial), *Environmental technology*, MSc/DIC, 1c yr f-t; designed to train graduates in environmental management areas of industry, local and national govt in UK and overseas; interdisciplinary treatment, *course content*: *term 1*: intro to environmental technology, physical environment, principles of applied ecology, primary mineral production, energy, environmental law, urban technology, resource economics, environmental policy, OR, environmental modelling, and sources and choices of technology, *term 2*: specialist option from: ecological management, energy policy, mineral production and environment, pollution, water management; *term 3*: individual project (NERC/ESRC/SERC). Contact Mrs DS Paterson-Fox
- 95:38 London (Imperial), *Public health engineering*, MSc/DIC, 1 yr f-t; training for engineers and scientists with work experience or sp interest in control of pollution in environment and protection of public health, modular course; *modules offered*: hydrogeol, water supply and distribution, wastewater collection systems, water treatment, wastewater treatment (theory, design and control), environmental eng chem, stat analysis and modelling in water eng, open channel flow, urban hydrology, rainfall measurement and analysis, microbiol for engineers, water-related tropical diseases, water supply and sanitation in developing countries, water quality management, bacteriology, industrial effluent treatment, computer programming, lab tests in exam of water and water-borne wastes, air pollution control, water resources, systems modelling and optimisation of solid and hazardous wastes management, written exams, design project (SERC). Contact Dr M Baldwin
- 95:39 London (Queen Mary), *Water resources engineering*, MSc, 1 yr f-t or 3 yrs p-t (deg in civil eng, maths, geol, geog or related discipline req); broad course covering water eng practice and management, compulsory modules, hydraulics, hydrology, water quality, math methods, planning control and economics, selective modules from pumping systems, water resource systems optimisation, river eng, irrigation eng, ocean eng, earth structures, water supply and wastewater disposal exam, coursework and project. Contact Dr JJR Williams, Dept of Civil Engineering
- 95:40 London (UC), *Environmental design and engineering*, MSc, 1c yr f-t: 2 yrs p-t (hons deg in architecture, building science, eng or other cognate subj normally req); *course content*: integrated units principles of environmental eng, natural and artificial lighting, building acoustics and noise heating, ventilation and air conditioning, environmental applications; written exam on each unit report (gives RIBA part 2 exemption if combined with *Architecture*, Diploma (see Architecture)). Contact Dr M Symes
- 95:41 Loughborough, *Water and waste engineering for developing countries*, MSc/ALUT
- 95:42 Manchester, *Pollution and environmental control*, MSc/Diploma. See page 426
- 95:43 Manchester (UMIST), *Pollution and environmental control*, MSc/DipTechSci
- 95:44 Middlesex Poly, *Air and water pollution control*, MSc/Diploma (CNA)
- 95:45 Napier C (Edinburgh), *Biology of water management*, MSc (CNA)
- 95:46 Newcastle, *Public health engineering*, MSc
- 95:47 Newcastle, *Water resources*, MSc
- 95:48 Poly of Central London, *Air and water pollution control*, MSc/Diploma (CNA)

- 95 49 Sheffield City Poly, *Chemical pollution monitoring*, MSc/Diploma  
 95 50 Sheffield City Poly, *Water engineering and pollution control*, MSc/Diploma (CNAAB)  
 95 51 Southampton, *Environmental and energy aspects of automotive engine design*, MSc  
 95 52 South Bank Poly, *Energy resources management*, MSc/Diploma (CNAAB)  
 95 53 South Bank Poly, *Environmental engineering*, MSc/Diploma (CNAAB)  
 95 54 Strathclyde, *Public health and environmental control engineering*, MSc/Diploma  
 95 55 Strathclyde, *Water engineering*, MSc

### Certificates and diplomas

- 95 56 Farnborough CT, *Pollution measurement*, Advanced Diploma (CNAAB)  
 95 57 Middlesex Poly, *Water supply and public health engineering*, Diploma  
 95 58 Newcastle, *Public health engineering*, Certificate  
 95 59 Newcastle, *Public health engineering*, Diploma  
 95 60 Newcastle, *Water resources*, Diploma  
 95 61 NE London Poly, *Civil engineering*, Diploma

## ENVIRONMENTAL SCIENCE AND TECHNOLOGY LANCASTER UNIVERSITY

The higher degrees of PhD (3 years) and MPhil (2 years) are gained by research in areas such as Environmental Chemistry and Pollution Studies (including Environmental Radioactivity), Geomagnetism, Crustal Structure and Isostasy; Volcanism and Tectonics, Sedimentology, Sedimentary Geochemistry; Hydrogeology; Hydrological Modelling Water Resources Engineering Geology; Soils Remote Sensing Planetary Studies, Upper Atmosphere and Boundary Layer Studies, Environmental Technology (including Microprocessor Applications, Environmental Systems Analysis, Management and Control, Recursive Time-Series Analysis and Signal Processing Climatological and Meteorological Modelling)

The Department also offers modular postgraduate MSc and Diploma courses (1 year) in Environmental and Ecological Sciences. Lectures, coursework and individual projects provide specialist training. Course combinations are offered in the areas of Water Resources, Environmental Pollution and Terrestrial Ecology. Applicants are normally expected to have a first degree in a subject such as Chemistry, Biology, Geology, Environmental Sciences, Engineering, Geography.

Copies of the Graduate Studies Prospectus and application forms are obtainable from Graduate Studies Officer, Department of Environmental Science, Lancaster University, Lancaster LA1 4YQ, England.

## UNIVERSITY OF MANCHESTER

### MSc/Diploma

#### Pollution and environmental control

1-2c yrs f-t (MSc), 1 yr f-t (Diploma)

Joint course with Manchester (UMIST); *course content:* intro (definition and relationship to wider problems, waste diffusion, risk assessment, principles underlying estimation of pollution damage and its technical, legal and admin control), pollution damage (relationship between waste disposal and pollution accumulation and passage through food chains, detection of persistent pollutants by chem and biol methods and biol indicators, effects of pollution on agriculture, fisheries, human health and wildlife, estimation of pollution damage), noise, oil spillage, technical control systems (monitoring systems, technical means of control and removal of pollutants within processes and at release, criteria for selection of methods, recycling sewage and toxic waste disposal), public authority control systems (econ assessment of damage, optimal pollution control, cost considerations in town planning, legal and admin systems in UK, methods of control, planning powers, control systems in foreign countries), research project, dissertation (MSc), essay (Diploma) (SERC)

Contact: Mrs C Gee, Environmental Bioscience, University of Manchester, Mathematics Tower, Oxford Road, Manchester M13 9PL

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for additional  
information

Index starts on  
page 518



- 96:21 *Engineering, marine, naval architecture and shipbuilding*  
hydrodynamics, marine eng (inc materials and ship environment); coursework inc ship design project and individual research project Contact Dr RSJ Corran
- 96:21 **London (UC), Ocean engineering**, MSc/Diploma, 1c yr f-t, lecture course covers offshore structures (adv structural analysis and design, foundation considerations), dynamics (wave loading and dynamics of fixed, floating and compliant offshore platforms), ocean environment (sea as a random process, materials in marine environment), maritime studies (maritime law, marine geol, man in the sea, econ and management aspects), individual project, design studies and fieldwork. Contact Dr RSJ Corran
- 96:22 **Manchester, Maritime civil engineering**, MSc/Diploma
- 96:23 **Newcastle, Marine engineering**, MSc
- 96:24 **Newcastle, Marine technology**, MSc/Diploma See page 428
- 96:25 **Royal Naval EngC, Marine engineering**, MSc (CNA)
- 96:26 **Southampton, Oceanography**, MSc/Diploma
- 96:27 **Strathclyde, Marine technology**, MSc
- 96:28 **Strathclyde, Ship production technology**, MSc

## Certificates and diplomas

- 96:29 **Glasgow, Naval architecture and ocean engineering**, Diploma
- 96:30 **Newcastle, Marine engineering**, Diploma
- 96:31 **Newcastle, Naval architecture**, Certificate See page 428
- 96:32 **Newcastle Poly, Offshore materials and corrosion engineering**, Diploma (CNA)
- 96:33 **Robert Gordon's IT (Aberdeen), Offshore engineering**, Diploma (CNA)
- 96:34 **Strathclyde, Ship technology**, Diploma

## University of Newcastle upon Tyne

### Postgraduate Opportunities in Marine Technology

The School of Marine Technology is concerned with engineering for the sea, and its work in teaching and research embraces marine engineering, marine transport, naval architecture, shipbuilding and ocean engineering.

The School now offers a variety of opportunities for advanced study or research. Formal study courses include

MSc and Diploma in Marine Technology  
MSc and Diploma in Marine Engineering  
MSc in Offshore Engineering  
Certificate in Naval Architecture

MSc courses, for which some studentships are available, involve 12 months' full-time study. Diploma and Certificate courses last for nine months. All courses commence in October each year.

Research, leading to MSc or PhD, can be undertaken in any branch of marine technology. In addition to well established research activities in marine propulsion, diesel engine development, condition monitoring, hydrodynamics, structures, and sea transport, new research groups and facilities in ocean engineering and marine engineering have recently been created. The School is participating in a major programme of offshore engineering research being sponsored by the Science and Engineering Research Council. Links with marine industry and related organisations are particularly good.

If you would like to visit the School, or have further information, please write to

The Secretary, The School of Marine Technology,  
University of Newcastle upon Tyne,  
Armstrong Building, Newcastle upon Tyne NE1 7RU.



2-phase flow; separation of liquid droplets from flowing gas or vapour; rotor dynamics; calculation methods for elastic rotors supported on oil films; dynamic response of machinery attached to floating vessels; calculation methods to evaluate excursions and stresses in inter-tensioners in response to wave forces and floating ship motions; vapour power cycles; computer procedures, computer packages for prelim design of plant esp for utilisation of waste heat; boiling heat transfer: boiling mechanism under flow conditions on shell side of bundles, heat pumps; natural circulation in ducts: behaviour and stability of circulating flows in vertical tubes and other geometries, CAE: computer-aided draughting and modelling, computer-aided information flow in small batch production, automated tool management, intercomparing, robotic devices and work piece handling and loading systems, human body and prostheses modelling, expert systems in design and manufacture; modal analysis of linear and non-linear structures; dynamic properties of visco-elastic materials. Contact Dr BM Burnside

97:17 Huddersfield Poly, *Mechanical and production engineering*, MPhil/PhD (CNA)

97:18 Kingston Poly, *Mechanical, aeronautical and production engineering*, MPhil/PhD

97:19 Lancashire Poly, *Mechanical and production engineering*, MPhil/PhD (CNA)

97:20 Leeds, *Mechanical engineering*, MPhil/PhD

97:21 Leicester Poly, *Mechanical and production engineering*, MPhil/PhD (CNA)

97:22 Liverpool, *Mechanical engineering*, MEng/PhD

97:23 Liverpool Poly, *Mechanical, marine and production engineering*, MPhil/PhD (CNA) *Sup*

97:24 London (Imperial), *Mechanical engineering*, MPhil/PhD, supervision available for research opportunities in following fields, some specific projects named: *applied mechanics*: biomechanics, development of orthopaedic implants, dynamics, tribology, manufacturing technology, strength materials, *fl mechanics*, *heat transfer and combustion*: turbulent flows, improved design methods for combustion chambers of gas turbines, ic engines and furnaces, flow and heat-transfer characteristics of intake ducts, bends and headers, *nuclear power*: theoretical techniques for design of radiation shields in complex form, the finite element method, assessment of environmental impact of nuclear reactors, the methods for modelling atmospheric transport of radionuclides over complex terrain, waste management implications of decommissioning nuclear reactors; *thermal power*, cogeneration technology, application of exptl and theoretical techniques to wide range of fl mechanics, thermodynamics and combustion, problems related to internal combustion engines, turbocharging and steam turbines. Contact Professor JG Williams

97:25 London (KQC), *Mechanical engineering*, MPhil/PhD; supervision available for research projects in: improvement of diesel engine efficiency; combustion in small high speed diesel engines; prediction and measurement of gas flow patterns in cylinders of ic engines; control of exhaust emissions from ic engines; study of turbulence in engine cylinders; investigation of gas flow in turbochargers, microprocessor control of engines; mixed refrigerants; absorption refrigeration systems; regulation of refrigerant flow to evaporators; freezing of foodstuffs; heat and mass transfer in porous bodies; flow characteristics of jet-augmented reactors; hydraulic characteristics of oil drilling bits; investigation of convective heat transfer by liq crystal thermography; multiphase and non-Newtonian internal flow; investigation of the flow patterns of fuel sprays; bearing running-in characteristics and surface finish; dynamically-loaded, hydrodynamically-lubricated plain bearings, EHD lubrication, automated sensing and assembly; noise and vibration characteristics of automobile braking systems; frictional damping of structures; impact and noise effects of bearing clearance in mechanisms; prediction of oil film thickness in flexibly mounted bearings; friction and wear behaviour of ion implanted steels, cast irons and ceramics; effects of ion implantation on the fretting fatigue resistance of bearing steels and ceramics; extrusion of pastes; deep bed screening, oil-free refrigeration compressors; fracture mechanics analysis. Contact Mr SC Whitlock

97:26 London (Queen Mary), *Mechanical engineering*, MPhil/PhD; research interests in following main areas: fl mechanics and heat transfer, thermodynamics, combustion engines, stress analysis, processing and properties of materials, dynamics, systems analysis, optimisation, control and automation, aspects of CAE; specific staff interests in: investigations of unsteady compressible flows; various aspects of condensation heat transfer; enhanced condensation on low integral-film tubes; correlation of exptl data in relation to eqns of state of fls; natural convection flows; combustion characteristics of liq fuel sprays in air at high pressures; thermoeconomic analysis and optimisation of thermal plant components and plant configurations using exergy method form 2nd-law analysis; design analysis techniques such as finite element methods; vibration of composite plates in presence of hydrostatic, centrifugal and thermal stress; design and development of coal-fired power plants for industrial, marine and traction applications; simulation of mechanical

- systems, analysis and synthesis of linkage and robotic systems and mobility analysis in such systems Contact Professor JW Rose
- 27 London (UC), *Mechanical engineering*, MPhil/PhD
- 28 Loughborough, *Mechanical engineering*, MSc/MTech/PhD
- 29 Manchester, *Mechanical engineering*, MSc/PhD, supervision available research projects inc aerodynamics and fl mechanics studies of ground winds around tall buildings fire ventilation, turbulence in high intensity shear flows, 2 phase flow, flow measurement by computer, design
- 30 Manchester (UMIST), *Mechanical engineering*, MSc/PhD See page 437
- 31 Manchester Poly, *Mechanical, production and chemical engineering*, MPhil/PhD (CNA)
- 32 Newcastle, *Mechanical engineering*, MSc/PhD
- 33 Newcastle Poly, *Mechanical engineering*, MPhil/PhD (CNA)
- 34 NE London Poly, *Manufacturing studies and mechanical engineering*, MPhil/PhD (CNA)
- 35 N Staffs Poly, *Mechanical and civil engineering*, MPhil/PhD (CNA)
- 36 Nottingham, *Mechanical engineering*, MPhil/PhD
- 37 Open, *Engineering mechanics*, BPhil/MPhil/PhD
- 38 Paisley CT, *Mechanical and production engineering*, MPhil/PhD (CNA)
- 39 Plymouth Poly, *Mechanical engineering*, MPhil/PhD (CNA), supervision available for research, recent topics inc manufacture and properties of composite materials, renewable and low grade energy utilisation, autopilotage of ships in confined waters, rule induction and AI applications in mechanical eng, combustion generated pollution Contact Academic Registrar
- 40 Poly of Wales, *Mechanical and production engineering*, MPhil/PhD (CNA)
- 41
- 42
- 43
- 44
- 45 Sheffield City Poly, *Mechanical and production engineering*, MPhil/PhD (CNA)
- 46
- incompressible swirling flow, cyclone separators, flow props of foams, automatic liq coolant systems, *machine dynamics* drive train dynamics for vehicles fitted with continuously variable transmission, vibration in beam structures, control of rotodynamic assemblies, mechanics of composite structures, helicopter rotordynamics, dynamics of wind turbines, structural dynamic testing and conditions of monitoring, *thermodynamics* pipe freezing thermal stresses and influence on steel properties, ic engines, aspects of numerical heat transfer, *instrumentation* microprocessor instrumentation systems Contact AJ Munday
- 47 South Bank Poly, *Mechanical and production engineering*, MPhil/PhD (CNA), supervision available, current projects inc creep of wood in concurrently changing humidities, theoretical and



- 97:48 Strathclyde, Mechanical engineering, MSc/PhD;** research areas: *thermodynamics and heat transfer*: dynamics of compressor valves; pulsations in compressor systems; 2-phase flow; flow patterns in boiler tubes; sudden pressure drops and circulation; *nuclear power*: after-heating in reactor fuel elements; transient natural convective cooling; water-cooled reactor channel heat transfer studies; sub-cooled boiling in narrow channels; *fl mechanics, tribology, fl power*: computer controlled pump testing, compressor design using CAD, pump design using CAD, laser anemometry, wind power studies; *environmental eng*: ventilation of commercial and industrial buildings; *mechanics of materials*: pressure vessel and piping design; inelastic analysis methods, piping components, support problems, shape imperfections; submarine pipelines; fracture mechanics applications; finite element studies; materials testing investigations; design of thin walled structures; load carrying capacity of roof and flooring systems, buckling and postbuckling behaviour; designing with composite materials; GRP and CFRP applications, mountings and supports, tee junctions, filament wound piping and carbon fibre panels; optical stress analysis including optecord system applied to fracture mechanics measurements, residual stress determination, tube rolling and high temperature strain measurement; *dynamics and control*: modelling, identification and control of rotor-bearing systems; vibrations in rotating machinery; active control of vibrations; modelling and control of transmissions; *design*: CAD, graphics involving automatic draughting, surface generation, perspectives and hidden line analysis, graphing, contouring and N/C simulation, optimum design. Contact Dr WM Banks
- 97:49 Sunderland Poly, Mechanical engineering, MPhil/PhD (CNAACNAAC)**
- 97:50 Surrey, Mechanical engineering, MPhil/PhD;** supervision available, fields of research inc: *biomedical eng*: clinical gait analysis, mobility, communication aids for spastic children and disabled; *control systems eng*: robotic design, robot performance measurement, fl control systems, vision systems, expert systems, electrohydraulic switching valves; *flow measurement*: effects of flow pulsations on performance of flow meters, use of laser doppler instruments; *fl mechanics*: buff body flows, free jet flows, stratified flow studies around hills and buildings, flow over moveable weir gates, pressure wave studies related to pipeline explosions; *stress analysis*: behaviour of laminated structures, photoelastic analysis of bolted joints, inelastic deformation of reinforced structures; *dynamics*: turbine blade vibrations, finite element methods in vibration analysis; *structural analysis*: nonlinear buckling characteristics of plates and shells, testing of offshore structures subj to pressure and compression, dynamic response of structures to transient loading; *ic engines*: exptl and analytical study of combustion of lean mixtures; *design and production techniques*: CAD and manufacture esp related to small and medium sized companies. Contact Professor GA Parker
- 97:51 Sussex, Mechanical and civil engineering, MPhil/DPhil See page 437**
- 97:52 Teesside Poly, Mechanical engineering, MPhil/PhD**
- 97:53 Thames Poly, Mechanical engineering, MPhil/PhD (CNAACNAAC)**
- 97:54 Trent Poly, Mechanical engineering, MPhil/PhD (CNAACNAAC)**
- 97:55 Ulster, Mechanical and industrial engineering, MPhil/DPhil**
- 97:56 Wales (Cardiff), Mechanical engineering and energy studies, MSc/PhD**
- 97:57 Wales (Swansea), Mechanical engineering, MSc/PhD**
- 97:58 Wales (UWIST), Mechanical engineering and engineering production, MEng/PhD**
- 97:59 Warwick, Mechanical engineering, MSc/PhD**
- 97:60 Wolverhampton Poly, Mechanical engineering, MPhil/PhD (CNAACNAAC)**

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 97:61 Aberdeen, Instrument design, MSc**
- 97:62 Bath, Diesel engine technology, MSc**
- 97:63 Birmingham, Machine tool and manufacturing technology, MSc See page 437**
- 97:64 Birmingham, Thermodynamics and related studies, MSc See page 438**
- 97:65 Cranfield, Automotive product engineering, MSc**
- 97:66 Cranfield, Design of production machines and systems, MSc, 1-2 yrs f-t (for 1-yr course honours degree in approp subj req); syllabus: yr 1: eng sciences, mechanics of machines, design of machines, control**

- 97.67  
97.68  
97.69  
97.70  
97.71  
97.72 Cranfield, *Thermal power*, MSc  
97.73 Cranfield, *Valve design and technology*, MSc  
97.74 Cranfield, *Welding technology*, MSc  
97.75 Durham, *Engineering*, MEng  
97.76 Leeds, *Tribology and computer aided machine design*, MEng  
97.77 Liverpool, *Advanced manufacturing systems and technology*, MEng 1 yr f t 2 yrs p-t syllabus adv manufacturing systems, applied microcomputing control and instrumentation adv manufacturing technology and eng management plus substantial 6 mth project lecture topics examined for students interested in transferring to careers in manufacturing industry hons deg or equiv entry, (SERC, Industrial places) Contact Dr J Driscoll Course Director AMST (Quote ref AMST03)  
97.78 Liverpool, *Power plants and energy related studies*, MEng  
97.79 London (Imperial), *Advanced applied mechanics*, MSc/DIC, 1 yr f t, aims to give expertise in techniques of adv applied mechanics in industry univs polys and govt establs core course computing stress analysis, dynamics, optional modules applied dynamics creep fatigue and fracture, polymer eng, mechanics applied to manufacturing lubrication and wear pressure vessels, manufacturing applications, plus research project and report (SERC) Contact Professor JG Williams  
97.80  
97.81  
97.82  
97.83  
97.84  
97.85 Sheffield City Poly, *Engineering (mechanical engineering design)*, MSc/Diploma (C NAA)  
97.86 Southampton, *Environmental and energy aspects of automotive engine design*, MSc/Diploma  
97.87 Strathclyde, *Mechanical engineering*, MSc

## Certificates and diplomas

- 97.88 Dundee, *Mechanical engineering*, Diploma  
97.89 Humberide CHE (Hull), *Refrigeration engineering or refrigeration and air conditioning*, Diploma  
97.90 West Glamorgan IHE (Swansea), *Mathematical education*, Diploma (Math Assoc)

## Cryogenics

## SOUTHAMPTON UNIVERSITY

### Degree MSc/PhD

Length of course 1 year full time (MSc) 3 years full time (PhD) part time by arrangement

Description of course The Institute of Cryogenics at Southampton covers all training and research fields in the application of low temperatures below about 250 K.

and instrumentation of LHe LIN LOX LNG and LPG cryosurgery and cryomedical techniques cryogenic trans-sonic wind tunnels space cryogenic fluid and mechanical systems magnetic separation using superconducting magnets for minerals and bio-processing cryo-chemistry  
Entrance requirements Good degree in engineering or appropriate science subject

# School of Mechanical Engineering

## One-Year MSc Courses

**Energy and Buildings** – This course is designed for those who have an interest in the designs of energy-efficient buildings. Part of the tuition provided will introduce students of an engineering or scientific background to the constraints which apply to architects, building surveyors, building economists, planners and civil engineers, while conversely students of these disciplines will become familiar with the engineering approach to energy efficiency. Graduates from this course will be immediately useful as contributors to the growing number of multi-disciplinary teams involved with the design of the built environment.

**Energy Conservation and the Environment** – This course is designed for engineers, scientists and mathematicians who wish to gain an in-depth understanding of energy thrift. Emphasis is placed on energy conscious design and management, thermal insulation, waste-heat recovery, furnace design, integrated environmental design of buildings and the effects of energy release on the environment. The scheme of study includes a research or design project.

**Energy Studies** – The coveted French degree of Diplôme d'Ingénieur as well as the prestigious Cranfield MSc can now be gained through a two-year **double-degree** course in Energy Studies. This dual qualification ensures that British engineers can practise throughout western Europe. The first year of the course is presented at the University of Technology at Compiègne near Paris, and the second year at Cranfield. Some knowledge of French is essential although pre-course extra tuition is arranged if required.

**Engineering Mechanics** – This is an industrially related course aimed at providing comprehensive instruction in selected topics in Engineering Mechanics. Extended treatment is given to vibration and stress analysis, tribology and design philosophy. The course is based on a combination of lecture courses and research.

**Finite Element Stress and Vibration Analysis** – Modern analytical methods such as the finite-element and boundary-integral techniques are covered in this course in parallel with the more classical methods. Computer aided design, numerical techniques, fatigue and fracture, plasticity and experimental stress analysis are also dealt with. The course project is based upon an industrial problem and could be carried out partly 'in-company'.

**Graduates with a good honours degree** in an appropriate subject are invited to apply for admission to these **one-year MSc courses**.

A preliminary-year course of study is available for candidates with other qualifications. This course is designed to prepare students for entry into the one-year MSc programme of their chosen specialisation.

**Excellent facilities are available for those wishing to study for a PhD degree by research.** For the two-year PhD programme candidates must have a good postgraduate qualification, while for the three-year programme they require at least a good honours degree.

**Accommodation** – two halls of residence are situated on the campus and provide individual study-bedrooms. In addition, a block of flats and some houses may be available for married students.



- Machine Design** - This course is concerned with advanced design of machines such as gas-turbines, steam-turbines and power transmission systems. Graduate design projects are usually industrially based.
- Noise and Vibration of Rotating Machines** - This course is aimed at the production of dynamicists and noise specialists for machines ranging from small motors to turbines. It covers the latest computational and prediction techniques, and deals with machine malfunction and health monitoring.
- Pump and Valve Design and Technology** - These courses have been developed at the request of the British Pump and Valve Manufacturers' Association, to overcome the current shortage of high-calibre engineers necessary for carrying out the advanced design and research required for a healthy British pump and valve industry.
- Automotive Product Engineering** - Product engineering in the automotive industry includes the whole process of vehicle engineering from concept to the manufactured product. The course covers the whole process of vehicle engineering from concept to the manufactured product.

- Rotating Machinery Engineering and Management** - The course emphasises subjects of particular interest to major users of rotating machinery in oil, gas and process industries - prime movers and driven equipment, selection, commissioning and operation, project planning and management.
- Combustion and Fuels** - The lecture programme and research project cover both the applied sciences involved in understanding the combustion process and the application to a range of engine and industrial thermal power systems, including and economy, alternative fuels and pollutant emissions.
- Rocket Propulsion** - The principles and operation of a variety of air-breathing rocket propulsion systems are studied. A well-established course in aircraft centred on the gas turbine, is complemented by studies of systems important to spacecraft and missiles.
- Further particulars, including details of Scholarships and bursaries may be obtained from

The Tutor for Admissions, School of Mechanical Engineering  
Tel: 1389, Cranfield Institute of Technology, Cranfield,  
Bedford MK43 0AL Tel: Bedford (0234) 750111. Telex: 825072

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Engineering and applied

## ASTON UNIVERSITY

Department of Mechanical and  
Production Engineering

### POSTGRADUATE OPPORTUNITIES

#### ONE YEAR MSc TAUGHT COURSES IN

- Computer Aided Design for Manufacture (supported by MSC)
- Advanced Manufacturing Technology (approved by EITB)

Both courses comprise 6 months' taught work followed by 6 months' project.

#### RESEARCH FACILITIES

Research projects are currently available in the general areas of

Computer Aided Design  
Computer Aided Manufacture  
Computer Aided Production Management  
Computer Integrated Manufacture  
Design and Control of Manufacturing Systems

Further information from:

Dr G Beaumont  
Mechanical & Production Engineering Department  
Aston University  
Aston Triangle  
Birmingham B4 7ET

## Aston University

### Department of Mechanical and Production Engineering

Opportunities for MSc  
(part-time and full-time)  
MPhil - PhD  
(part-time and full-time)

One-year modular advanced course for MSc  
degree in Computer-Aided Design  
Lectures in Geometric Modelling, Finite Element  
Analysis, Design, Methodology, Microprocessor-  
based Control, etc

Two terms' lectures

Remainder of course full-time project

MPhil - PhD studies in exploiting Microprocessors  
Control, Stress and Dynamical Analysis, Topics in  
CAD ranging from Geometric Modelling to Expert  
Systems and Finite Element Applications

Grants from SERC

Enquires  
Dr J E Penny

Department of Mechanical and Production  
Engineering  
Aston University  
Birmingham B4 7ET



## LIVERPOOL POLYTECHNIC

### DEPARTMENT OF MECHANICAL, MARINE AND PRODUCTION ENGINEERING

MSc/Postgraduate Dip  
(Computer Aided Eng)

The course provides preparation for an  
industrial career, specialising in CAD/CAM  
SERC and MSC awards are available

#### Higher degrees by research:

MPhil/PhD

Research topics available in:  
Hybrid Bearings, Laser Vision Systems  
(Automatic Inspection and Engineering Optics),  
Manufacturing Systems and Processes,  
Mechanisms and Machines (High Speed  
Machines and Robotics), Servo-Valve Dynamic  
Flow Analysis, Computational Fluid Dynamics

Applicants should either have an Honours  
degree in Engineering, Physics or Applied  
Mathematics or a degree plus relevant  
industrial experience

Further information from: Dr W Weston,  
Acting HOD, Department of Mechanical,  
Marine and Production Engineering, Liverpool  
Polytechnic, Byrom Street, Liverpool L3 3AF

## UNIVERSITY COLLEGE LONDON

### MSc Course in NON-DESTRUCTIVE EVALUATION

This part-time course has developed from the  
Mechanical Engineering Department's growing re-  
search involvement with non-destructive testing and  
its expertise in fracture mechanics and fatigue

It is primarily intended for candidates employed by  
organisations engaged in the production or applica-  
tion of inspection equipment and who will be  
seconded to the course by their employers

Lecture and laboratory classes will involve atten-  
dance at UCL for one complete term of the academic  
year. Subjects covered include ultrasonics, electro-  
magnetics, radiography, instrumentation, materials  
fracture mechanics, reliability, quality control, auto-  
mation and control, mathematics, design and stress  
analysis. During the remainder of the year, project  
work will be performed in the laboratories at the  
student's employer under the supervision of an in-  
dustrial tutor and a tutor from UCL. The course will  
extend over a period of two calendar years

Details and application forms from  
The Postgraduate Tutor(sg), Dept Mech Eng  
University College London  
Torrington Place, London WC1E 7JE

Degree MSc (Eng)

Length of course 1 year full time up to 4 years part time

No of places 15 maximum

Description of course Intended for graduates in or about  
mechanical manufacturing industry. The course comprises the

hands-on experience

Entrance requirements Open to all engineering graduates  
with a good honours degree and others with approved  
qualifications who already have satisfactory industrial  
experience

Grant The course is accepted by the SERC as tenable for  
SWITCH Advanced Course Studentships

Acting Head of department Professor R Davies

Application and enquiries The Admissions Secretary The

University of Birmingham Department of Mechanical

Engineering PO Box 363, Birmingham B15 2TT

Telephone 021 472 1301 ext 3636/2714

## UMIST

University of Manchester  
Institute of Science and  
Technology

MSc/PhD Mechanical Engineering

MSc courses by examination and  
dissertation are available in

Advanced Manufacturing Technology

Applied Mechanics

Polymer Engineering

A wide range of research projects is also  
available for PhD and MSc by research  
in the above areas and in the Division of  
Thermodynamics and Fluid Mechanics

Further details, including the  
availability of financial support,  
may be obtained from

The Postgraduate Admissions  
Tutor, Department of Mechanical  
Engineering, UMIST, Manchester  
M60 1QD.

## University of Sussex

MPhil/DPhil Mechanical Engineering  
and Civil Engineering

Supervision available research projects include  
heat transfer to turbine blade, heat transfer in  
rotating flows with special reference to cooling of  
gas turbine discs and blade, general studies in

rectangular hollow section beams, shear  
strength of masonry, compressive behaviour of  
masonry, compressive behaviour of masonry walls  
interacting with steel and concrete members,  
prediction of strength in plates and stiffening of  
IHS beams

Further information from  
Chairman of Mechanical and Civil  
Engineering  
The School of Engineering  
University of Sussex  
Falmer Brighton BN1 9QJ

## ASTON UNIVERSITY

Department of Mechanical and  
Production Engineering

### POSTGRADUATE OPPORTUNITIES

#### ONE YEAR MSc TAUGHT COURSES IN

- i. Computer Aided Design for Manufacture (supported by MSC)
- ii. Advanced Manufacturing Technology (approved by EITB)

Both courses comprise five months' taught work followed by six months' project.

#### RESEARCH FACILITIES

Research projects are currently available in the general areas of:

Computer Aided Design  
Computer Aided Manufacture  
Computer Aided Production Management  
Computer Integrated Manufacture  
Design and Control of Manufacturing Systems

Further information from:

Dr G Beaumont  
Mechanical & Production Engineering Department  
Aston University  
Aston Triangle  
Birmingham B4 7ET

## Aston University

Department of Mechanical and  
Production Engineering

Opportunities for MSc  
(part-time and full-time)  
MPhil - PhD  
(part-time and full-time)

One year modular advanced course for MSc degree in Computer Aided Design.  
Lectures in Geometric Modelling, Finite Element Analysis, Discrete Methods and Microprocessor based Control, etc.  
Two term lectures

Remainder of course full-time project

MPhil - PhD studies in exploring Microprocessor Control, Stress and Dynamical Analysis, Topics in CAD ranging from Geometric Modelling to Expert Systems and Finite Element Applications.

Grants from SERC

Enquiries  
Dr J E Potts  
Department of Mechanical and Production Engineering  
Aston University  
Birmingham B4 7ET

## LIVERPOOL POLYTECHNIC

### DEPARTMENT OF MECHANICAL MARINE AND PRODUCTION ENGINEERING

MSc/Postgraduate Dip  
(Computer Aided Eng)

The course provides preparation for an industrial career, specialising in CAD, CAM, SERC and MSC awards are available.

Higher degrees by research  
MPhil/PhD

Research topics available in:  
Hybrid Bearings, Laser Vision Systems  
(Automatic Inspection and Engineering Optics),  
Manufacturing Systems and Processes,  
Mechanisms and Machines (High Speed  
Machines and Robotics), Servo Valve Dynamics,  
Flow Analysis, Computational Fluid Dynamics

Applicants should either have an Honours degree in Engineering, Physics or Applied Mathematics or a degree plus relevant industrial experience.

Further information from: Dr W Weston,  
Acting HOD, Department of Mechanical,  
Marine and Production Engineering, Liverpool  
Polytechnic, 6, Rom Street, Liverpool L3 3AF

## UNIVERSITY COLLEGE LONDON

### MSc Course in NON-DESTRUCTIVE EVALUATION

This part-time course has developed from the Mechanical Engineering Department's growing research involvement with non-destructive testing and its expertise in fracture mechanics and fatigue.

It is primarily intended for candidates employed by organisations engaged in the production or operation of inspection equipment and who will be seconded to the course by their employers.

Lecture and laboratory classes will involve attendance at UCL for one complete term of the academic year. Subjects covered include ultrasonics, eddy currents, radiography, instrumentation, materials, fracture mechanics, reliability, quality control, automation and control, mathematics, design and stress analysis. During the remainder of the year, project work will be performed in the laboratories at the student's employer under the supervision of an industrial tutor and a tutor from UCL. The course will extend over a period of two calendar years.

Details and application forms from:  
The Postgraduate Tutor(sg), Dept Mech Eng  
University College London  
Torrington Place, London WC1E 7JE

## Machine tool and manufacturing technology

Degree MSc (Eng)

Length of course 1 year full time up to 4 years part time  
No of places 15 maximum

Description of course Intended for graduates in or about to enter manufacturing industry. The course comprises the

hands-on experience

**Entrance requirements** Open to all engineering graduates with a good honours degree, and others with approved qualifications who already have satisfactory industrial experience

## UMIST

University of Manchester  
Institute of Science and  
Technology

MSc/PhD, Mechanical Engineering

MSc courses by examination and  
dissertation are available in:

Advanced Manufacturing Technology

Applied Mechanics

Polymer Engineering

A wide range of research projects is also

Further details, including the  
availability of financial support,  
may be obtained from:

The Postgraduate Admissions  
Tutor, Department of Mechanical  
Engineering, UMIST, Manchester  
M60 1QD.

## University of Sussex

MPhil/DPhil: Mechanical Engineering  
and Civil Engineering

Supervision available, research projects include  
heat transfer to turbine blading, heat transfer in  
rotating flows with special reference to cooling of

masonry, composite behaviour of masonry walls  
interacting with steel and concrete members,  
prediction of strength in plates, end stiffening of  
RHS beams

Further information from

Chairman of Mechanical and Civil  
Engineering  
The School of Engi  
University of S  
Falmer, Brighton



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## Thermodynamics and related studies

UNIVERSITY  
BIRMINGHAM

Degree MSc (Eng)

Length of course 1 year full time

No of places 15 maximum

**Description of course** This is normally a 12-month course, commencing on 1 October, leading to MSc (Eng) by course and laboratory work and a project. The course is designed for graduates whose interests lie in the area of heat and fluid flow processes in power plant, their component parts and in the process industries. The compulsory courses cover thermodynamics, gas dynamics, heat transfer, combustion theory, turbo machinery, condensation phenomena, internal combustion engines, microprocessor technology and computational fluid mechanics.

Optional courses are given in dynamics and solar energy.

Projects are offered after the first term and these are

submitted at the end of the course, on the basis of the research programme within the department. Projects be theoretically or experimentally based and in the latter case opportunities for gaining experience of on-line data acquisition techniques are provided. During the year, specialist lectures are given by visiting lecturers from industry. In special circumstances a preliminary 1-year course is possible. Arrangements are also being made to offer the course over 4 years on a part-time basis.

**Entrance requirements** Good honours degree or equivalent in engineering, physics or mathematics.  
**Acting Head of department** Professor R Davies  
**Application and enquiries** The Admissions Secretary, University of Birmingham, Department of Mechanical Engineering, PO Box 363, Birmingham B15 2TT.  
Telephone 021-472 1301 ext 3638/2714

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## 98 Engineering: minerals and mining

### Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

- 98 1 **Nottingham, Civil and structural engineering, MSc/PhD**  
 98 2 **Nottingham, Mining engineering, MSc/PhD**  
 98 3 **Nottingham, Mining engineering, MSc/PhD**  
 98 4 **Heriot Watt, Petroleum engineering, MSc/PhD**  
 98 5 **Leeds, Mining and mineral engineering, MPhil/PhD** supervision available research interests mining eng geophysical and geochem prospecting mining geol, mining and petroleum geostats mining simulation rock physics and rock mechanics drilling technology pneumatic and hydraulic transportation heat flow, methane production and migration ventilation in mines digital survey

Contact Professor PA Young

- 98 6 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 7 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 8 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 9 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 10 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 11 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 12 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 13 **Leeds, Mining and mineral engineering, MSc/PhD**

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workings

- 98 14 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 15 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 16 **Leeds, Mining and mineral engineering, MSc/PhD**  
 98 17 **Leeds, Mining and mineral engineering, MSc/PhD**

### Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

- 98 18 **Aberdeen, Petroleum geology, MSc**

- 98:19 Camborne SMines, *Mining geology*, MSc (CNAAB)
- 98:20 Cranfield, *Offshore engineering*, MSc
- 98:21 Durham, *Engineering geology*, MSc, 1 yr f-t; 2 yrs p-t (according to quals); *course content* geotechnical subjs, emphasis on soil mechanics/soil engineering, rock mechanics/rock engineering eng geol, eng hydrology, microcomputing; fieldwork; assessment by exam, design report and dissertation (SERC) Contact Dr RK Taylor
- 98:22 Heriot-Watt, *Petroleum engineering*, MEng
- 98:23 Hull, *Industrial mineralogy*, MSc
- 98:24 Leeds, *Engineering geology*, MSc, 1c yr f-t (according to quals); up to 3 yrs p-t (deg in geol, civil mining eng req), course offered by Depts of Earth Sciences, Civil Eng, Mining and Mineral Eng *course content* applications of geol to eng, eng geophysics, hydrogeol, photogeol, rock mechanics tropical and arid soil origin and properties, soil mechanics, foundation eng, computing, lab and field practicals, site visits; exam and dissertation (NERC). Contact Dr WJ Varker
- 98:25 Leeds, *Mining geostatistics*, MSc, 1c yr f-t; up to 4 yrs p-t (modular); designed for mine value planners and operators, modular structure enabling completion by intermittent study; *course covers* design of sampling programmes, feasibility studies, mine planning, operational geostats (grade control), strong computing element. Contact Professor PA Young
- 98:26 London (Imperial), *Engineering geology*, MSc/DIC
- 98:27 London (Imperial), *Engineering rock mechanics*, MSc/DIC
- 98:28 London (Imperial), *Environmental technology*, MSc/DIC
- 98:29 London (Imperial), *Mineral exploration*, MSc/DIC
- 98:30 London (Imperial), *Mineral process design*, MSc/DIC
- 98:31 London (Imperial), *Mineral production management*, MSc/DIC
- 98:32 London (Imperial), *Petroleum engineering*, MSc/DIC
- 98:33 London (Imperial), *Petroleum geology*, MSc/DIC
- 98:34 Newcastle, *Engineering geology*, MSc
- 98:35 Newcastle, *Rock mechanics and excavation engineering*, MSc
- 98:36 Nottingham, *Mining engineering*, MSc, 1 yr f-t (deg in mining usually req); comprehensive background in design and operations in combination with econ decision making, flexible approach to suit individual reqs, emphasis on mine design and operations inc computer aided methods Contact Professor I Atkinson
- 98:37 Strathclyde, *Petroleum engineering*, MSc

## Certificates and diplomas

- 98:38 Camborne SMines, *Mineral technology*, Diploma
- 98:39 Leeds, *Mineral engineering*, Diploma
- 98:40 Leeds, *Mining engineering*, Diploma
- 98:41 Newcastle Poly, *Offshore materials and corrosion engineering*, Diploma (CNAAB)
- 98:42 Robert Gordon's IT (Aberdeen), *Offshore electronic systems*, Diploma
- 98:43 Robert Gordon's IT (Aberdeen), *Offshore engineering*, Diploma (CNAAB)
- 98:44 Robert Gordon's IT (Aberdeen), *Offshore materials and corrosion engineering*, Diploma (CNAAB)

**University of Strathclyde**  
**DEPARTMENT OF MINING**  
**AND PETROLEUM**  
**ENGINEERING**

Research projects available for PhD and MSc postgraduate studies in

- Coal-mining engineering
- Strata control
- Opencast mining and quarrying
- Oil production engineering
- Gas production engineering
- Mining subsidence

Instructional postgraduate course for MSc/  
Diploma is available in

- Petroleum engineering

*Further details are available from*

**Mr W Boyle**  
**Department of Mining and Petroleum**  
**Engineering**  
**University of Strathclyde**  
**75 Montrose Street**  
**Glasgow G1**

**Consult**  
**an**  
**institution's**  
**official**  
**prospectus**  
**before**  
**applying**

## 99 Engineering: nuclear

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

**99:1 London (Imperial), Nuclear engineering, MPhil/PhD**

**99:2 London (Queen Mary), Nuclear engineering, MPhil/PhD;** supervision available, interests in following areas: aerosol behaviour, radiative heat transfer and finite element methods; turbulence theory, numerical and theoretical study of turbulence, 2-phase flow, reactor safety; exptl heat transfer and fl flow; computer-aided teaching, nuclear fuel management, microcomputer control of reactors; Monte Carlo method, finite element method, optimisation of nuclear power systems; fl mechanics and heat transfer, theory of gas centrifuge. **Contact Dr J Wood**

**99:3 Manchester, Nuclear engineering, MSc/PhD;** supervision available; research interests: *heat transfer:* cover gas and liq sodium heat transfer, aerosol characteristics, re-wetting and carburisation of steel, all with application to liq metal cooled fast reactors; thermal radiation from irradiated fuel elements, ceramic materials, irradiated fuel and high level waste containers for transport or storage; influences of buoyancy and thermal boundary conditions on convective heat transfer in nuclear power systems; very fast transient boiling processes with application to thermal explosions; dryout during flow reversals, direct condensation, flow leakage through cracks, all with application to pressurised water reactors; heat and mass transfer from rotating bodies; *reactor physics:* neutron wave propagation in moderators; *control:* kinetic behaviour and control of thermal plant; application of multivariable control theory to design of nuclear reactor control systems. **Contact Professor P Montague**

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

**99:4 Birmingham, Physics and technology of nuclear reactors, MSc**

**99:5 London (Imperial), Nuclear technology, MSc/DIC**

**99:6 London (Queen Mary), Nuclear reactor science and engineering, MSc/Diploma, 1c yr f-t (deg in eng or science subj or approved equiv qual req);** adv training for grad engineers and scientists proposing to enter or already working in nuclear industry; *course content:* nuclear reactor theory, exptl reactor physics, reactor shielding, reactor kinetics and control, heat transfer and fl dynamics, nuclear materials and fuel elements, reactor fuel technology, reactor safety and siting, pressure vessel design and codes of practice; assessment by exam and thesis/report. **Contact Dr J Wood**



100:30 Warwick, *Manufacturing engineering*, MSc/PhD

100:31 Wolverhampton Poly, *Production engineering*, MSc/PhD (CNAAs/various univs)

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

100:32 Belfast, *Industrial engineering*, MSc/Diploma

100:33 Birmingham, *Engineering production and management*, MSc, 1c yr f-t; education and training for production eng and management positions in industry; *core course: systems and basic costing* systems management, costing, computing; *human resource management*: manpower systems, ergonomics, industrial law, relations etc; *quantitative methods*: applied stats, OR techniques; 1 of following 3 options: *manufacturing management and technology*: design of production systems (production planning and control, plant layout, quality and reliability eng), manufacturing systems and econ analysis (numerical eng, manufacturing systems, econ considerations), manufacturing technology (production processes, materials technology); *quality and reliability*: stat quality control (acceptance sampling, control chart methods), reliability eng (systems reliability, maintenance and renewal, testing and assessment), quality and reliability management (organising, role of standards, development of reliable designs); *industrial management*: industrial economics and marketing (industrial economics, marketing, finance and accounting), industrial management (operations management, business organisation and policy, quality and reliability management), manufacturing systems and econ analysis (numerical eng, manufacturing systems, econ considerations); project reports (SERC). Contact Dr JH Gordon

100:34 Birmingham, *Flexible manufacturing systems*, MSc(Eng)

100:35 City, *Manufacturing technology*, MSc

100:36 Coventry (Lanchester) Poly, *Engineering for manufacturing industry*, MSc/Diploma (CNAAs)

100:37 Coventry (Lanchester) Poly, *Engineering manufacture*, MSc (CNAAs)

100:38 Cranfield, *Advanced manufacturing technology*, MSc See page 447

100:39 Cranfield, *CAD and CAM of production machines and systems*, MSc

100:40 Cranfield, *Computer integrated manufacture*, MSc

100:41 Cranfield, *Design of production machines and systems*, MSc

100:42 Cranfield, *Distribution technology and management*, MSc

100:43 Cranfield, *Flexible manufacturing systems incorporating CAM and control*, MSc

100:44 Cranfield, *Industrial engineering and production management*, MSc

100:45 Cranfield, *Manufacturing systems engineering*, MSc, 1 yr f-t; *syllabus*: manufacturing systems, manufacturing for new product, machining technology for manufacturing systems, design for econ manufacture, computer simulation of manufacturing, systems analysis, manufacturing quality, industrial manufacturing systems analysis, production control of batch manufacturing systems, management and professional skills, selection of adv course modules; microprocessors in machine systems, electronics and control systems, precision eng; individual and team projects in manufacturing systems eng. Contact Dr JM Kay

46 Edinburgh, *Advanced production engineering*, MSc

47 London (Imperial), *Industrial robotics and manufacturing automation*, MSc/DIC

48 Loughborough, *Flexible manufacturing systems and robotics*, MSc

100:49 Loughborough, *Plant engineering in the process industries*, MSc/ALUT

100:50 Manchester (UMIST), *Advanced manufacturing technology*, MSc/Diploma

100:51 Manchester (UMIST), *Manufacturing engineering*, MSc

100:52 Newcastle Poly, *Computer assisted manufacture*, MSc/Diploma (CNAAs)

100:53 Nottingham, *Advanced manufacturing systems*, MSc, 1 yr f-t, or 2 yrs p-t; covering automated/CADCAM/robotics technologies and computer integrated manufacturing management. Contact Professor EN Corlett See page 447

100:54 Salford, *Manufacturing engineering*, MSc

100:55 Strathclyde, *Computer integrated manufacture*, MSc See page 445

100:56 Sussex, *Computer integrated manufacturing systems*, MSc

100:57 Warwick, *Information technology for manufacture*, MSc See page 446

100:58 Warwick, *Manufacturing systems engineering*, MSc See page 446

## Certificates and diplomas

Engineering production 100

- 100 59 Cambridge, *Advanced production methods and management*, Certificate
- 100 60 Lancaster, *Advanced production methods and management*, Certificate
- 100 61 Newcastle Poly, *Automation technology*, Diploma (CNAA)
- 100 62 Paisley CT, *Quality engineering*, Diploma
- 00 63 Sheffield City Poly, *Engineering (manufacturing engineering)* Diploma (CNAA)
- 00 64 Strathclyde, *Production engineering and management* Diploma

## UNIVERSITY OF STRATHCLYDE



To be effective in industry, graduate engineers and scientists must be equipped to manage advanced production systems  
Our Postgraduate Programme works closely with industry helping it to introduce new technology and management techniques

We offer

- MSc in Computer Integrated Manufacture, including
- Flexible Manufacturing and Assembly Systems
- Robotics and Microprocessors
- CAD, CAM
- Quality and Reliability Engineering

MSc and PhD by Research in many of the above topics  
MSc (Teaching Company Scheme) PhD (Total Technology Scheme)  
Diploma in Production Engineering and Management

Financial support may be available  
For further information contact Professor D S Ross, Department of Design,  
Manufacture & Engineering Management, (MEM Division), University of  
Strathclyde, Glasgow G1 1XJ Telephone 041 552 4400 ext 2329/2330

Engineering



**THE UNIVERSITY OF WARWICK**

## **MSc MANUFACTURING SYSTEMS ENGINEERING**



**THE UNIVERSITY OF WARWICK IS AT THE FOREFRONT OF** Manufacturing Systems Engineering research and teaching. The Warwick course has been jointly developed by academics and specialists from industry.

**CONTENT:** The candidate selects part of the content and the course covers fields vital to the continued development of manufacturing activities including

Manufacturing Processes, Facilities and Materials  
Information Technology  
Computer Integrated Manufacture  
Automation and Robotics

Quantitative Techniques and Decision Analysis  
Manufacturing Control  
Financial Management and Risk Analysis

**STRUCTURE:** This is a full-time one-year taught course and a modular system is adopted for course work, which is continuously assessed. In addition, an industrially-oriented research project, assessed by dissertation and oral examination, is undertaken.

**FACILITIES:** The University has excellent research facilities including the largest academic CAD/CAM CENTRE in Western Europe, extensive Computer facilities, and Robotics, Control, FMS and Manufacturing Simulation laboratories.

The normal minimum entry requirement is a second class honours degree or equivalent qualification in a scientific or engineering discipline.

Candidates not satisfying these requirements will be considered for either the MSc, Post Graduate Certificate or Preliminary course depending on their qualifications and engineering experience.

*For further details please contact* Dr S Garber, Director of Studies, Manufacturing Systems Engineering  
Department of Engineering, University of Warwick, Coventry CV4 7AL

**THE UNIVERSITY OF WARWICK**

## **MSc INFORMATION TECHNOLOGY FOR MANUFACTURE**



**THE UNIVERSITY OF WARWICK IS AT THE FOREFRONT OF** Information Technology research and teaching. The Warwick course has been jointly developed by academics and specialists from industry.

**CONTENT:** The course covers fields vital to the development of Information Technology and its application to manufacturing activities including

Computer Languages and Systems  
Information Technology  
Computer Integrated Manufacture  
Automation and Robotics

Quantitative Techniques and Decision Analysis  
Manufacturing Control  
Financial Management and Risk Analysis

**STRUCTURE:** This is a full-time one-year taught conversion course and a modular system is adopted for course work, which is continuously assessed. In addition, an industrially-oriented research project, assessed by dissertation and oral examination, is undertaken.

**FACILITIES:** The University has excellent research facilities including the largest academic CAD/CAM CENTRE in Western Europe, extensive Computer facilities, and Robotics, Control, FMS and Manufacturing Simulation laboratories.

The normal minimum entry requirement is a second class honours degree or equivalent qualification and SERC studentships are available.

Candidates not satisfying these requirements will be considered for either the MSc, Post Graduate Certificate or Preliminary course depending on their qualifications and experience.

*For further details please contact* Dr S Garber, Director of Studies, Information Technology for Manufacture  
Department of Engineering, University of Warwick, Coventry CV4 7AL

## College of Manufacturing



1-year MSc courses in

- Industrial Robotics
- Manufacturing Systems Engineering
- CAD/CAM of Production Machines & Systems
- Advanced Manufacturing Technology
- Industrial Engineering
- Flexible Manufacturing Systems
- Design of Production Machines & Systems
- Management Science & Computer Applications
- Computer Integrated Manufacture

Industrial sponsorship, SERC studentships and bursaries available for 1st/2nd honours graduates

Apply to: Professor Jack Dinwale  
College of Manufacturing  
Oxford Institute of Technology  
Oxford, Bedford MK43 0AL  
Telephone: 0234 752758

## LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY



Department of Engineering Production

Postgraduate Opportunities in Manufacturing  
MSc course in Computer Integrated Manufacture

engineering, computer networks, information systems and artificial intelligence. Financial support through SERC Advanced Course Studentships and Manpower Services Commission re-training grants.

funding

Further details from: Professor R Bell, Head of Department, Department of Engineering Production, Loughborough University of Technology

## UNIVERSITY OF NOTTINGHAM

Department of  
Production Engineering and  
Production Management

MSc in Advanced Manufacturing Systems

A one-year full-time programme

- Automation and robotics
- Systems modelling and design
- Operations management and information technology
- Human resource planning

The Department also offers MPhil and PhD by research in all aspects of manufacturing technology and management

For further information contact  
Professor E N Corlett,  
telephone 0602 506101 ext 2421

**More  
information**  
is in the parent  
edition

**Graduate  
Studies**

at your careers  
service

# 101 Engineering: traffic, transport and highway

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 101:1 Aston, *Civil engineering and construction*, MPhil/PhD
- 101:2 Birmingham, *Transportation and highway engineering*, MSc/PhD
- 101:3 Bradford, *Civil and structural engineering*, MPhil/PhD
- 101:4 Coventry (Lanchester) Poly, *Industrial design*, MPhil/PhD (CNAAC)
- 101:5 Heriot-Watt, *Civil engineering*, MSc/PhD
- 101:6 Leeds, *Transport studies*, MEng/MPhil/PhD; supervision available in Transport Studies Inst; main interests: estimation of demand for travel, assessment of planning and policy issues for both urban and inter-urban transport. Contact Professor KM Gwilliam
- 101:7 London (Imperial), *Transport*, MPhil/PhD
- 101:8 London (Queen Mary), *Civil engineering*, MPhil/PhD
- 101:9 London (UC), *Transport*, MPhil/PhD; supervision available in Dept of Civil and Municipal Eng. research interests: transport planning (analysis of survey data, math modelling, techniques for use in developing countries); traffic management and control inc road junction design and use of information technology; road safety (accident stats, urban road safety). Contact Professor Richard Allsop
- 101:10 Loughborough, *Transport technology*, MSc/PhD
- 101:11 Manchester (UMIST), *Civil and structural engineering*, MSc/PhD
- 101:12 Newcastle, *Civil engineering*, MSc/PhD
- 101:13 Nottingham, *Civil engineering*, MPhil/PhD
- 101:14 Open, *Energy studies*, BPhil/MPhil/PhD
- 101:15 Poly of Central London, *Environment*, MPhil/PhD (CNAAC)
- 101:16 Poly of Wales, *Civil engineering and building*, MPhil/PhD (CNAAC)
- 101:17 Salford, *Civil engineering*, MSc/PhD See page 450
- 101:18 Sheffield, *Transport and traffic engineering*, MEng/PhD
- 101:19 Southampton, *Civil engineering*, MPhil/PhD
- 101:20 Strathclyde, *Civil engineering*, MSc/PhD
- 101:21 Ulster, *Transport studies*, MPhil/DPhil

## Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

- 01:22 Birmingham, *Highway and traffic engineering*, MSc
- 101:23 Birmingham, *Highway engineering for developing countries*, MSc
- 101:24 Birmingham, *Traffic engineering for developing countries*, MSc
- 101:25 Birmingham, *Transportation and traffic planning*, MSc
- 101:26 Bradford, *Transportation*, MSc/Diploma
- 101:27 City, *Civil engineering (highways and transport)*, MSc
- 101:28 City, *Transport management*, MSc
- 101:29 Cranfield, *Air transport engineering*, MSc
- 101:30 Cranfield, *Air transport management*, MSc
- 101:31 Cranfield, *Transport studies*, MSc, 1-2c yrs f-t (hons deg in maths, physical science, economics,

stats computing economics throughout (SERC) **Contact** Dr JM Clark

01 32 Heriot Watt, *Transportation*, MSc/Diploma

01 33 Leeds, *Transport planning and engineering*, MSc 1 2c yrs f t 2c yrs p-t *course covers* transport planning and policy analytical methods transport eng computer programming and applications, 4 of transport infrastructure design civic design and architecture traffic management planning

KM Gwynne

01 34 I

01 35 :

design of airports airport planning procedures environmental planning of airports airport finance, airport operations, air transport economics aircraft characteristics as they relate to airports, operations research in airport management and design applications of stat analysis to airport problems air transport legislation and regulation airport traffic operations analysis, airport labour relations management techniques for airport operators plus a project **Contact** RE Cavet

01 36 Newcastle, *Transport engineering and operations*, MSc/Diploma/Certificate

01 37 Poly of Central London, *Transportation planning and management* MSc (CNA)

01 38 Royal CA, *Transport design* MA

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01 40 e 450

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## Certificates and diplomas

- 101:47 Birmingham Poly, *Transport and traffic engineering*, Diploma  
101:48 Birmingham Poly, *Transport planning and management*, Diploma  
101:49 Middlesex Poly, *Highway and traffic engineering*, Diploma  
101:50 Napier C (Edinburgh), *Transportation planning in developing countries*, Diploma  
101:51 Poly of Central London, *Transport and development*, Diploma  
101:52 Salford, *Transport and development*, Advanced Certificate

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## Transport engineering and planning

## UNIVERSITY OF SALFORD

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Degree MSc

Length of course 1 year full time, 2 years part time

No of places 24

**Description of course** The course has been designed for students interested, or already active, in a career in the management and/or planning of transport facilities. Graduates of the full-time course take employment typically with engineering and planning departments of local and central government, passenger transport executives and other bus operators, British Rail, freight transport operators, and transport consultants. Part-time students usually have the sponsorship of employers in these fields in the North West, by virtue of the motorway network the catchment area has extended from Cumbria to Staffordshire, and from Gwynedd to West Yorkshire. The aim of the course is to provide an opportunity for comprehensive and intensive study of local, regional and national problems involving all modes of passenger and freight transport. Completion of the course entitles candidates to exemption from the educational requirements for Corporate Membership of the Chartered Institute of Transport. Areas of study

include traffic engineering, transport planning, public passenger transport, freight transport, transport system design, civic design and planning, land economics, transport economics, transport policy, statistics, operational research, and computing. Assessment is by coursework, written examination, and dissertation.

**Entrance requirements** Honours degree in any relevant subject (including civil engineering, economics, geography and mathematics) or suitable professional qualifications.

**Grants** The full-time course has been recognised by the Science and Engineering Research Council for the award of advanced course studentships. Other similar value awards and TOPs awards are also available for suitable applicants on the full-time course. Early application is desirable for these awards and interviews take place throughout the year.

**Application and enquiries** Dr P R Brookes, Administrative Officer, Department of Civil Engineering, University of Salford, Salford M5 4WT. Telephone 061-736 5843 ext 7125.

# 102 Ergonomics

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

102.1 *Pennsylvania State University, Harrisburg, PA, USA, MSc/PhD*

102.2 *University of Illinois, Urbana, IL, USA, MSc/PhD*

102.3 *University of Michigan, Ann Arbor, MI, USA, MSc/PhD*

102.4 *University of Wisconsin, Madison, WI, USA, MSc/PhD*

102.5 *London (Royal Free), Ergonomics, MPhil/PhD*

102.6 *Loughborough, Human sciences, MSc/PhD, both f t and p-t univ or industry based research, consumer ergonomics inc eqpt for disabled and elderly, human factors of information tech inc man-computer interaction, computer-aided design, training and processes, environmental ergonomics of vision, lighting, noise, vibration and thermal condns, human aspects of inspection and quality control, biodynamics and motor function analysis of movement, human energy studies by cardiovascular and respn tech, metabolic factors of occupational and climatic physiol, applied anthropol of growth, body compsn and diet, genetic structure of populations, circadian variations in performance and sleep research, speech perception and analysis, ecol investgns of effects of pollutants in freshwater systems, ecol management studies inc fishery and conservancy factors in agriculture etc*

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

102.7 *University of Illinois, Urbana, IL, USA, MSc/PhD*

human resources, syllabus inc workspace and eqpt design, measurement and evaluation of industrial performance, ergonomics of inspection and process control, ergonomics of working

102.8 *London (Birkbeck), Psychology, MSc/PhD*

102.9 *University of Illinois, Urbana, IL, USA, MSc/PhD*

102.10 *University of Michigan, Ann Arbor, MI, USA, MSc/PhD*

102.11 *London (Royal Free), Ergonomics, MPhil/PhD*

102.12 *University of Wisconsin, Madison, WI, USA, MSc/PhD*

thermal environments, accidents and safety, interface and workstation design, systems ergonomics, stats and computing for human sciences, 5 mth research project, possibility of advance to PhD studies - see 'Human Sciences' section

# 103 Geography (including surveying)

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 103:1 **Aberdeen, Geography**, MLitt/MSc/PhD
- 103:2 **Belfast, Geography**, MA/MSc/PhD
- 103:3 **Birmingham, Geography**, MA/MSc/MLitt/PhD
- 103:4 **Birmingham Poly, Construction and surveying**, MPhil/PhD (CNA A)
- 103:5 **Bradford, Environmental sciences**, MPhil/PhD
- 103:6 **Bradford, Languages and European studies**, MPhil/PhD
- 103:7 **Bradford, Yugoslav studies**, MPhil/PhD
- 103:8 **Brighton Poly, Geography**, MPhil/PhD (CNA A)
- 103:9 **Bristol, Geography**, MSc/MPhil/PhD; supervision available, research interests: *physical geog*: hillslope hydrology, mathematical run-off models and hydrology-stability coupling; Karst landforms and processes; soil and gully erosion and ecological processes in semi-arid, esp Mediterranean environments; Quaternary and recent environments of man; applied and satellite meteorology; org soils and their chem; *human geog*: location and spatial interaction of human activities in regional context and development of quantitative techniques for analysis of urban and regional systems; studies inc work on refinement of classical location theory, spatial stats, computer cartography, structure and growth of transport nets, models of spatial diffusion and inter-urban migration and perceptual environments; theoretical emphasis, students encouraged to test theory and refine techniques in applied studies and provide guidelines for regional planning decisions. Contact Professor JB Thornes
- 103:10 **Bristol Poly, Surveying**, MPhil/PhD (CNA A)
- 103:11 **Cambridge, Geography**, MSc/PhD
- 103:12 **Cambridge, Polar studies**, MSc/PhD
- 103:13 **City, Surveying**, MPhil/PhD
- 103:14 **City of London Poly, Geography**, MPhil/PhD (CNA A)
- 103:15 **Coventry (Lanchester) Poly, Geography**, MSc/PhD (CNA A)
- 103:16 **Dundee, Geography**, MPhil/PhD
- 103:17 **Durham, Geography**, MA/MPhil/MSc/PhD *See page 458*
- 103:18 **East Anglia, Environmental sciences**, MPhil/PhD
- 103:19 **Edinburgh, Geography**, MPhil/PhD
- 103:20 **Essex IHE, Built environment**, MPhil/PhD (CNA A)
- 103:21 **Exeter, Geography**, MPhil/PhD
- 103:22 **Glasgow, Cartography and photogrammetry**, MSc/PhD
- 103:23 **Glasgow, Geography**, MLitt/MSc/PhD
- 103:24 **Huddersfield Poly, Geographical sciences**, MPhil/PhD (CNA A)
- 103:25 **Hull, Geography**, MPhil/MSc/PhD *See page 458*
- 103:26 **Keele, Geography**, MA/PhD
- 103:27 **Kingston Poly, Geography**, MPhil/PhD (CNA A)
- 103:28 **Lancaster, Surface processes**, MPhil/PhD
- 103:29 **Lancaster, Geography**, MPhil/PhD
- 103:30 **Leeds, Geography**, MPhil/PhD
- 103:31 **Leicester, Geography**, MPhil/PhD
- 103:32 **Liverpool, Geography**, MPhil/MSc/PhD; supervision available, principal interests inc: *human geog*: urban and regional econ change: *planning and policy issues*: development of office and intermediate services in metropolitan areas, policy evaluation studies of regional and industrial

103 33 **Liverpool Poly, Surveying**, MPhil/PhD (CNAAB)

103 34 **London (Birkbeck), Geography**, MPhil/PhD

103 35 **London (UCL), Geography**, MPhil/PhD

103 36 **London (UCL), Geography**, MPhil/PhD

103 37 **London (UCL), Geography**, MPhil/PhD supervision available research interests inc

vernacular architecture in Britain France and Germany *social/econ geog* urban social areas rural development inc agricultural geog esp Britain and tropical Africa cultural geog esp Latin America *land use* housing design derelict land recreational land use building land supply vandalism forestry use impact of motorways *regional interests* W Africa Benelux countries

103 38 **London (UCL), Geography**, MPhil/PhD

103 39 **London (UCL), Geography**, MPhil/PhD

regional studies, hist geog *physical geog* meteorology and climatology geomorphology *applied earth science* applied geol geomorphology and geochem *environmental science* urban and rural

103 40 **London (UCL), Geography**, MPhil/PhD

103 41 **London (UCL), Geography**, MPhil/PhD

103 42 **London (UCL), Geography**, MPhil/PhD

tal resources Quaternary tectonics palaeoecology acid rain *computing* geog information systems and spatial analysis Contact Dr RJC Munton

103 43 **London (UC), Photogrammetry and surveying**, MPhil/PhD supervision available research activities inc analytical photogrammetry based on recent analytical plotter automation of plotting instruments and analogue plotter design camera calibration and aerial triangulation adjustment

IA Harley

103 44 **London (UCL), Geography**, MPhil/PhD

103 45 **London (UCL), Geography**, MPhil/PhD

103 46 **London (UCL), Geography**, MPhil/PhD

103 47 **London (UCL), Geography**, MPhil/PhD

103 48 **Newcastle, Geography**, MPhil/MSc/PhD supervision available within following research programmes *geog and regional development studies* interests inc British urban regional



development processes, industrial innovations, telecommunications, labour market studies, office location, geog of elections, population redistribution, material culture in emerging world-economy; resource development in tropics, environmental resources and agricultural development, development process in agriculture and industry, demography and medical geog, geomorphology and sediment studies, gen field of heat and water balance at earth's surface with sp emphasis on regions in mid lats. Contact Dr LW Hanna

103:49 Newcastle, *Surveying*, MSc/PhD

103:50 Newcastle Poly, *Geography*, MPhil/PhD (CNA)

103:51 Newcastle Poly, *Surveying*, MPhil/PhD (CNA)

103:52 NE London Poly, *Land surveying*, MPhil/PhD (CNA)

103:53 N Staffs Poly, *Geography*, MPhil/PhD (CNA)

103:54 Nottingham, *Geography*, MPhil/PhD; supervision normally available in following research fields: *geomorphology* (coastal, glacial, tectonic), *biogeog*, *applied physical geog*, *Quaternary studies*, *remote sensing*, *economic geog* (including agricultural and industrial), *population geog*, *settlement geog* (urban and rural), *historical geog*, *medical geog*; regional interests inc Arctic, Scandinavia, Eastern and Mediterranean Europe, Soviet Union, Latin America, Middle East, East Africa (geomorphology). Contact Head of Department

103:55 Open, *Geography*, BPhil/MPhil/PhD

103:56 Oxford, *Geography*, MLitt/MSc/DPhil

103:57 Plymouth Poly, *Geographical sciences*, MPhil/PhD (CNA); supervision available for research; interests inc: studies of small businesses in SW, stream flow monitoring, analysis of EEC common fisheries policy, soil nutrient movements. Contact Academic Registrar

103:58 Poly of Central London, *Geography*, MPhil/PhD (CNA)

103:59 Poly of North London, *Geography*, MPhil/PhD (CNA)

103:60 Poly of Wales, *Civil engineering and building*, MPhil/PhD (CNA)

103:61 Poly of Wales, *Science*, MPhil/PhD (CNA)

103:62 Portsmouth Poly, *Geography*, MPhil/PhD (CNA)

103:63 Reading, *Geography*, MPhil/PhD

103:64 St Andrews, *Geography*, MSc/MPhil/PhD

103:65 St Paul & St Mary's C, *Geography*, MPhil/PhD (CNA)

103:66 Salford, *Geography*, MSc/PhD See page 457

103:67 Sheffield, *Geography*, MPhil/PhD; supervision available, research interests: *physical geog*: climatological studies, geomorphology, landform-soil relationships and soil characteristics, land classification relationships, remote sensing, biogeography, hydrology and fluvial studies; *human geog*: rural settlement and land use, urban geog, transport problems, industrial geog, environmental perception, population geog and hist demography, agricultural geog, regional science, resource management, remote sensing, regional development problems in Britain. Contact Secretary for Graduate Admissions (either Physical or Human Geography)

103:68 Sheffield City Poly, *Environmental and recreational studies*, MPhil/PhD (CNA)

103:69 Southampton, *Geography*, MPhil/PhD

103:70 Stirling, *Environmental science*, MSc/PhD; supervision available; research interests: geomorphology of crystalline terrains; tropical and palaeotropical landforms; Quaternary environmental change in humid tropics of W Africa; application of geomorphology to land resource mapping; land evaluation, esp for planning purposes; glacial and Quaternary geomorphology; Arctic and Alpine environments; fluvial geomorphology and sedimentology; flood prediction; hydrology of Cairngorms; water quality in Scotland; pedology; variability of soil structure and morphology under different managements; soil hydrology and water chem; effects of tree spp on soil genesis; microclimatology and hydrometeorology; applied climatology and hydrology; urban climates; weather-related hazards; data sources and data handling in local climatology; thermal regimes in inter-tidal mudflats and in upland soils; dynamic modelling of growth and development of urban and regional systems; environmental modelling; role of local planning authorities in management of natural resources; environmental impact assessment; integrated rural development; environmental remote-sensing applications. Contact Dr P Selman

103:71 Strathclyde, *Civil engineering*, MSc/PhD

103:72 Strathclyde, *Geography*, MSc/PhD

103:73 Sunderland Poly, *Geography*, MPhil/PhD (CNA)

103:74 Sussex, *Geography*, MPhil/DPhil

103:75 Thames Poly, *Geography*, MPhil/PhD (CNA)



## 103 : 104–130 Geography (including surveying)

- 103:104 London (UC), *Numerical methods in photogrammetry and surveying*, MSc/Diploma**  
**103:105 London (UC), *Photogrammetry*, MSc/Diploma, 1c yr f-t (MSc), 9 mths f-t (Diploma)** (deg in eng, physics, maths, geog, land surveying or topographic science req); course inc: theory and practical aspects of aerial photography and its use in cartography, relevant math and computational techniques, treatment of principles and design of plotting instruments; individual project and report (NERC). Contact Professor IA Harley  
**103:106 London (UC), *Remote sensing*, MSc**  
**103:107 London (UC), *Surveying*, MSc/Diploma, 1c yr f-t (MSc), 9 mths f-t (Diploma)** (deg in cognate subj req for MSc); *course content*: eng surveying, topographical surveying, cartography, geodetic survey, cadastral survey, e-m distance measurement and relevant math and computational techniques, intro to land registration; individual project and report (NERC). Contact Professor IA Harley  
**103:108 Loughborough, *Geography and education*, MSc**  
**103:109 Nottingham, *Engineering surveying*, MSc**  
**103:110 Oxford, *Geodesy*, MSc**  
**103:111 Salford, *Applied geography*, MSc** See page 457  
**103:112 Salford, *Geography*, MA/MSc/Diploma** See page 457  
**103:113 Sunderland Poly, *Geography and development*, MA (CNA)**  
**103:114 Ulster, *Geography*, MSc**  
**103:115 Wales (Lampeter), *Geography*, MA**

## Certificates and diplomas

- 103:116 Bristol Poly, *Surveying*, Research Certificate/Diploma**  
**103:117 Dundee, *Digital mapping and remote sensing*, Diploma**  
**103:118 East Anglia, *Environmental sciences*, Diploma**  
**103:119 Edinburgh, *Geography*, Diploma**  
**103:120 Glasgow, *Cartography*, Diploma**  
**103:121 Glasgow, *Digital mapping and automated cartography*, Diploma**  
**103:122 Glasgow, *Geography*, Diploma**  
**103:123 Glasgow, *Photogrammetry*, Diploma**  
**103:124 Glasgow, *Surveying*, Diploma**  
**103:125 London (LSE), *Geography*, Diploma**  
**103:126 NE London Poly, *Land administration and surveying*, Certificate/Diploma**  
**103:127 Plymouth Poly, *Hydrographic surveying*, Diploma (CNA)**  
**103:128 Salford, *Geography*, Advanced Certificate**  
**103:129 Strathclyde, *Geography*, Diploma**  
**103:130 Wales (Swansea), *Topographic science*, Diploma, 1 yr f-t; also MSc available, 2 yrs f-t (hons deg in cognate subj plus demonstrated interest and/or experience in subj req for MSc; hons deg in science preferred for Diploma); course covers surveying, photogrammetry and remote sensing, *syllabus*: techniques of data gathering, data processing and data presentation for map and chart compilation; all aspects of work involved in production of topographical maps, thematic maps and navigation charts; project for Diploma, thesis for MSc. Contact Professor N Stephens**

**Degree** MPhil/MSc/MLitt/PhD in geography  
**MSc and MA in meteorology and climatology**

**Description of course** Research interests in following areas  
 some specific projects named *climatology and applied meteorology* local weather forecasting satellite meteorology impact of climatic changes on economy and society *geomorphology* slope evolution and hydrology *biogeog* palaeoecology and environmental archaeology trampling and erosion *agricultural geog* management of moorland areas recreation recreational land use in Britain and overseas *urban geog* physical form of cities *transport geog* motorway accessibility and urban mobility *regional*

*planning* migration port development *hist geog* evolution of settlement and land use in British Isles and overseas *W Midlands* urban demographic and industrial geog *W Europe* Common Market countries Scandinavia *W Med t* erranean *USSR* urbanisation and econ developments in newly settled lands *W Africa* mining and labour migration in Sierra Leone and Mauritania *N America* con nection urban and rural settlement *S America* industrial development of Chile Venezuela and other states

**Applications and enquiries** The Postgraduate Tutor  
 Department of Geography The University of Birmingham  
 PO Box 363 Birmingham B15 2TT



## DEPARTMENT OF GEOGRAPHY

The University of Salford is close to the centre of Manchester with good access to Manchester International Airport. The Department occupies accommodation extensively refurbished and re-equipped in 1985/86.

**Research** MA, MSc, MPhil (1 year full time 2 years part time) PhD (3 years full time 5 years part time) Entry requirements and how to apply for a place can be found in the prospectus.

specialist on in problems of climate water resources and soil management under irrigation. Other interests problems of urban geomorphology in Greater Manchester historical geography of medieval England regional studies in Scandinavia EEC E Europe and Africa remote sensing.

**Taught courses** MA, MSc, Diploma in Geography 3 years part time (MA/MSc) 2 years part time (Diploma) 1 year full time for overseas candidates. course content philosophy issues in geog geog research methodology 3 options from comparative urban planning regional planning urbanisation in developing countries geog policy analysis and modelling transport geog and development environmental systems satellite remote sensing in climatology and earth resource studies nutrient cycling geomorphology of beaches local studies and sources in historical geog econ and social geog of EEC with special reference to France tropical Africa (geog perspectives) coursework assessment dissertation for MA/MSc MSc, Diploma in Transport and Development 1 year full time for overseas candidates. course content transport geog and development transport management and marketing research methods either urban specialisation in developing countries or regional planning coursework assessment dissertation for MSc. MSc Applied Geography 1 year full time 2-5 years part time choice of six modules available in the modular studies MA/MSc scheme coursework assessment and dissertation on MSc Urban Studies 1 year full time 2-5 years part time urban studies and research methods compulsory plus four appropriate modules available in the modular studies MA/MSc scheme coursework assessment and dissertation. Further details from the Postgraduate Tutor Department of Geography University of Salford Salford M6 4WT

# GEOGRAPHY AT DURHAM

**MA/MPhil/MSc/PhD** (full-time or part-time) by thesis: supervision available in: *overseas area studies*, focusing on aspects such as natural resources, climate, development, population, urbanisation, rural settlement, agricultural systems, political geography of the Middle East, Africa, Latin America, EEC, USSR; *human geography of the UK*: population, employment, regional economic change, built environment, environmental perception, historical geography, geography and education; *physical environment*: geomorphology and geomorphometry, Quaternary studies, Biogeography and resource management, soils and land capability, climate and water resources; *modern techniques*: remote sensing, data analysis and mathematical modelling, automated and statistical cartography, geographical information systems.

**MA in the Geography of the Middle East and Mediterranean**: 1 year full-time taught course, examination and dissertation; study of one or both regions, project work, seminars, fieldwork, problems of political, economic and social change.



## HULL UNIVERSITY Department of Geography

The Department provides supervision for the degrees of MSc and MPhil (either by research or by coursework and research) and the degree of PhD by research for well-qualified full-time and part-time students across a range of human and physical geography.

In **human geography** research interests include urban social geography (peripheral groups, ethnic residential patterns, crime, health care and housing); recreation and leisure, and transport geography. In **physical geography** research interests include geomorphology; soil formation and weathering; Quaternary studies; island biogeography; and hydrology.

The Department's Research Plan provides for special training in the following fields: **Environmental Degradation** (vegetation, soils, drainage basin erosion); **Natural Resource Management** (energy, water, fisheries, estuarine and coastal management); **Cartographic Information Systems** (digital mapping, computer cartography); and **Regional Systems** with reference to both the developed world (eg Western Europe) and to developing areas (eg SE Asia).

**Applications and enquiries** Professor R C Ward, Department of Geography, The University, Hull HU6 7RX.



## Department of Geography

### MSc in Geographical Information Systems

A core course covers the theory and implementation of geographical information systems using relational data base technology.

This is complemented during the first two terms by special subject modules covering the following topics

- Computer programming
- Digital mapping and computer graphics
- Statistical analysis, modelling and simulation
- Remote sensing applications
- Planning and public policy implications of GIS technology.

The second half of the course is devoted to individual research for the MSc thesis

Further details obtainable from  
R G Healey  
Department of Geography  
Drummond Street  
Edinburgh EH8 9XP

## DEPARTMENT OF GEOGRAPHY UNIVERSITY OF SHEFFIELD OPPORTUNITIES FOR GRADUATE RESEARCH

The Department occupies a modern, purpose-designed and well-equipped building. Located close to the centre of the University's main site, it is within 2 km of Sheffield's central business district and only 10 km from the edge of the Peak District National Park. With 23 academic staff, 12 technicians and 3 librarians it is one of the largest departments of geography in the UK.

Graduate students register for degrees by research either in the Faculty of Pure Science, for the degree of PhD or MPhil (in physical geography), or the Faculty of Social Sciences, for the degree of PhD or MPhil (in human geography). Both faculties offer a one-year Diploma course in geography. This is designed for those students from overseas who require further training in research skills and advanced course work before proceeding to a research degree.

Supervision for graduate research in **Physical Geography** is available in:

<b>Biogeography</b>	<b>Hydrology and</b>
<b>Climatology</b>	<b>Fluvial Studies</b>
<b>Geomorphology</b>	<b>Landform-Soil Relationships</b>
	<b>Remote Sensing</b>

Supervision for graduate research in **Human Geography** is available in:

<b>Industrial Location</b>	<b>Resource Analysis &amp;</b>
<b>Political &amp; Electoral</b>	<b>Management</b>
<b>Geography</b>	<b>Transport Studies</b>
<b>Population Studies</b>	<b>Urban Studies</b>
<b>Regional Economic Systems</b>	<b>Historical Demography</b>

Further details of the research facilities and methods of application may be obtained by writing to *either*:  
**Secretary for Graduate Admissions (Physical Geography)**  
or **Secretary for Graduate Admissions (Human Geography)**, Department of Geography, University of Sheffield, Sheffield S10 2TN, United Kingdom

## UNIVERSITY OF STIRLING



### Diploma/MSc in Environmental Management

Focused on the management of the natural environment, the course is designed to provide a sound knowledge of interacting natural systems, the impact of industrial and other projects, and management techniques, along with an understanding of the economics of environmental conservation and development. The Diploma course lasts for nine months with an additional three month project for the MSc. It is designed as a conversion course for scientists, economists and managers and at the same time offers opportunities for developing specialised skills

*Enquiries to*  
The Course Director  
Diploma/MSc in Environmental Management  
Department of Environmental Science  
University of Stirling  
Stirling FK9 4LA

# Index by subject headings

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## 104 Maritime studies

### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section*

- 104:1 **East Anglia, Fisheries**, MPhil/PhD
- 104:2 **Liverpool, Marine biology**, MSc/PhD; current research interests in which supervision available: respiratory physiol of bivalve molluscs and crustaceans, energy flow in inter-tidal ecosystems, inter-tidal ecology esp biotic interactions, larval and spore ecology, zoo-plankton, biochem genetics of marine organisms, population studies of fish and shellfish, parasitology of marine fishes, physiol ecology and gen biol of *Crustacea*, *in situ* studies by diving of sub-tidal algae and animals, seaweed ecology, physiol aspects of algal growth, cultivation of marine algae, rearing and growth of *Crustacea* and fish, marine pollution studies. Contact Professor TA Norton
- 104:3 **Liverpool, Oceanography**, MSc/PhD
- 104:4 **Liverpool Poly, Shipping and maritime studies**, MPhil/PhD (CNAAC)
- 104:5 **Plymouth Poly, Maritime studies**, MPhil/PhD (CNAAC); supervision available for research in following depts: *marine science*: estuarine processes, boundary layer meteorology, navigational safety and watch keeping, magnetism of galaxy, fishery science, maritime communications; *marine technology*: safety of small craft, trawler design, ship manoeuvring; *shipping and transport*: maritime transport, law, econ, geog and commerce — organisation, manning, portfolio planning and international trade; *transport studies*. Contact Academic Registrar
- 104:6 **St Andrews, Maritime studies**, MLitt/MPhil/PhD
- 104:7 **St Andrews, Marine biology**, MSc/PhD
- 104:8 **Salford, Marine technology**, MSc/PhD
- 104:9 **Wales (Bangor), Marine biology**, MSc/PhD
- 104:10 **Wales (Swansea), Oceanography**, MSc/PhD
- 104:11 **Wales (UWIST), Law**, LL.M PhD
- 104:12 **Wales (UWIST), Maritime studies**, MSc/PhD; opportunities for research in following fields: computers/information technology in shipping and ports; causal factors of collisions and strandings, performance of marine vehicles, stability and strength applications; maritime training technology; applications of simulation; *maritime transport*: port operations and planning, ship operations, economics, law, developing country studies; *harbour and offshore developments*: harbour conservation, sedimentology, exploitation of offshore minerals; *maritime geog*: international trade, geog of ports, maritime cartography; human relations on board ship, management studies in ports and shipping, *law of the sea* (in conjunction with Centre for Marine Law and Policy). Contact Professor J King

### Higher degrees by instruction

*Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.*

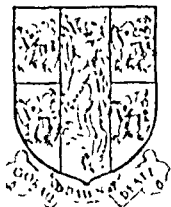
- 104:13 **City, Shipping and finance**, MSc/Diploma
- 104:14 **Glasgow, Marine science**, MAppSci/Diploma
- 104:15 **Liverpool, Maritime civil engineering**, MEng/Diploma
- 104:16 **Liverpool Poly, Maritime studies**, MSc (CNAAC)
- 104:17 **London (LSE), Sea-use law, economics and policy-making**, MSc
- 104:18 **London (UC), Marine geophysics**, MSc
- 104:19 **Manchester, Maritime civil engineering**, MSc/Diploma

- Maritime studies**
- Plymouth Poly.** *International shipping*, MSc (CNA) 1 yr full time or 2 or 3 step (relevant degree alternative qualification and experience considered) non attendance bridging course may be reqd stage 1 shipping policy (organisation corporate planning and marketing) shipping economics and finance QM in shipping (systems simulation correlation and regression forecasting) shipping environment (industry structure and markets law and operations) stage 2 shipping policy (strategy management control systems and international marketing) ship finance and international markets (public private and government funding) shipping organisation and operations (international markets and international institutions) shipping systems and development) shipping law (contracts carriage documentation insurance liability) interdisciplinary support programme research dissertation Contact Academic Registrar
- 104 21 **Royal Naval EngC.** *Maritime defence technology* MSc Diploma (CNA)
- 104 22 **St Andrews.** *Maritime studies* MLitt Diploma
- 104 23 **Wales (Bangor).** *Fisheries biology and management* MSc Diploma
- 104 24 **Wales (Bangor).** *Marine biology* MSc Diploma See page 462
- 104 25 **Wales (Bangor).** *Marine geotechnics* MSc Diploma See page 462
- 104 26 **Wales (Bangor).** *Marine geotechnics* MSc Diploma See page 462
- 104 27 **Wales (Bangor).** *Ocean electronics* MSc Diploma See page 462
- 104 28 **Wales (Bangor).** *Physical oceanography* MSc Diploma See page 462
- 104 29 **Wales (Bangor).** *Water resources geophysics* MSc Diploma
- 104 30 **Wales (Swansea).** *Applied marine science* MSc Diploma
- 104 31 **Wales (UWIST).** *Law LLM*
- 104 32 **Wales (UWIST).** *Maritime studies* MSc 1 yr full time or other approved process and qualification designed for senior management and those aspiring to become public officers and important decision makers in maritime industry subjects of study OR and computing financial aspects of ports and shipping policy ports and shipping development plus dissertation Contact Principal

## Certificates and diplomas

- 104 33 **City of London Poly.** *Shipping* Diploma
- 104 34 **Humbly Grove CHE (Hull).** *Fisheries* Diploma
- 104 35 **Liverpool.** *Marine pollution chemistry* Diploma
- 104 36 **London (UC).** *Shipping law* Diploma
- 104 37 **Plymouth Poly.** *Hydrographic surveying* Diploma (CNA) 1 yr full time or 2 or 3 step (relevant degree or appropriate qualification required) course designed to meet needs of persons employed in the maritime industry in shore and offshore hydrographic survey operations mainly in support of offshore oil and gas industry doing exploration development and production phases course content includes hydrographic survey trigonometrical survey geodesy computers and information transfer oceanographic marine geophysics survey maths meteorology law electronic maintenance global communications practical work Contact Academic Registrar
- 104 38 **Plymouth Poly.** *Management studies (shipping)* DMS (CNA) 8 months full time or equivalent and min age of 23 candidates over 27 with at least 4 yrs professional experience and knowledge needed for shipping management highlighting managerial techniques required for current developments in international shipping environment stage 1 environment and management (resource management shipping environment and business organisation) shipping management (management mathematics and accounting computer studies) shipping (shipping and port operations marketing technoeconomic shipping law personnel management employee relations) continuous assessment for progress to stage 2 business decision making (policy and planning operational decision making) shipping practice (shipping and port management handling system fleet management productivity and efficiency applications) shipping practice II (shipping markets finance shipping law and maritime project exams Contact Academic Registrar
- 104 39 **Wales (UWIST).** *Port and shipping administration* Diploma





## SCHOOL OF OCEAN SCIENCES

# University College of North Wales, Bangor

The School of Ocean Sciences at Bangor has recently been formed by the merger of the department of Marine Biology and the newly expanded department of Physical Oceanography. It is probably the largest university centre of Ocean Sciences in Europe, with expertise covering the complete range of marine science disciplines. The strong tradition of sea-going ocean studies at Bangor is facilitated by the College's ocean-going research vessel 'Prince Madog' as well as a number of smaller inshore vessels. Postgraduate opportunities exist, both to undertake research leading to the degree of PhD (3 years) or MSc (2 years) or to follow one of the following MSc taught courses each of 12 months' duration.

### MSc Courses

Physical Oceanography\*

Marine Geotechnics\*

Water Resource Geophysics

Marine Biology

Marine Archaeology

(\* recognised by NERC for the award of advanced course studentships).

*For further information, please contact*

**Professor D Taylor Smith, School of Ocean Sciences  
Marine Science Laboratories, Menai Bridge, Anglesey  
Gwynedd LL59 5EY, North Wales**

**Tel: Menai Bridge (0248) 712641 ext 263**

# 105 Materials science and technology (including metallurgy and ceramics)

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

105 1 Aston, Civil engineering and construction, MPhil/PhD

105 2 Bath, Materials science, MPhil/PhD

105 3 Birmingham Metallurgy and materials, MSc/PhD

alloys, electronic materials, thermo electric materials, thermomagnetic cooling, commodity markets, selective hedging in metal markets, polymers, materials testing of safety hardware, shrinkage and residual stresses in plastic extrusions, machining, machinability of high conductivity Cu, fracture and fatigue of metallic materials, growth of fatigue cracks from surfaces, powder metallurgy, powder metallurgy high speed and low speed steels, heat treatment, nitrocarburising of steel wire, plasma carburising, laser surface treatments, metal forming, formability of high

hanisms in  
titanium

105 4

105 5 Brunel, Materials technology, MPhil/PhD

105 6 Camborne SMines, Mining studies, MPhil/PhD (CNA)

105 7 Cambridge, Metallurgy and materials science, MSc/PhD

105 8 City, Mechanical engineering, MSc/PhD

105 9 City of London Poly, Metallurgy and materials, MPhil/PhD (CNA)

105 10 Coventry (Lanchester) Poly, Materials science, MSc/MPhil/PhD (CNA)

105 11 Cranfield, Materials, MSc/PhD

105 12 Cranfield, Materials handling and distribution systems, MPhil/MSc/PhD

105 13 Derbyshire CHE (Derby), Materials science, MPhil/PhD

105 14 Kingston Poly, Chemistry, MPhil/PhD (CNA)

105 15 Leeds, Ceramics, MEng/MPhil/PhD, supervision available: current research in: ceramics for high temp engines, fabrication and properties of silicon nitride and N ceramics, ceramics for chem energy storage, ion conduction in oxides, dielectric and piezo-electric ceramics, ceramic fabrication processes, sintering, grain growth, microstructure development, fabrication science of clay based ceramics, glasses, refractories, industrial ceramics and cement. Contact Professor RJ Brook

105 16 Leeds, Metallurgy, MPhil/PhD

105 17 Liverpool, Metallurgy and materials science, MEng/PhD, main areas of research: semiconductor materials, nanometer scale electron beam lithography, structural and chem analysis of interfaces in homojunction and heterojunction devices and super lattices, surface structure and epitaxial layer quality, modelling of dislocation distributions during crystal growth, polymer based composite materials, energy absorbing composites, injection moulding of fibre reinforced thermoplastics and thermosets, finite element analysis of composite structures, stress corrosion cracking in GRP,

in metals and alloys, computer simulation of defect structures in crystalline solids; solidification processes in metals and alloys. Contact RC Pond

**105:18 London (Imperial), Metallurgy and materials science, MPhil/PhD** See page 468

**105:19 London (Queen Mary), Materials, MPhil/PhD;** research interests inc: *metals*: cyclic deformation of bcc metals, structure and creep properties of Ni-based alloys, microplasticity in alloys for precision instrument applications; *polymers*: synthesis, structure and properties of polymer single-crystal fibres, crystallisation of polymers at ambient and high pressures, fracture of polymers, impact behaviour of polymers and plastic containers, structure and properties of rubbers, molecular fracture; *composites*: work with conventional composites such as glass-fibre reinforced plastics, exotic materials such as carbon fibre-metal matrix composites, polymer composites reinforced with polymer fibres, reinforced cements; *biomaterials*: structure and properties of bone and development of bone replacement materials, characterisation of structure and morphology of coal; *adhesion*: work with conventional adhesives, new techniques developed to test adhesive joints and to study adhesion of ice to surfaces and of materials to skin, characterisation of metal surfaces pretreated for adhesive bonding, long-term degradation of adhesive joints. Contact Professor W Bonfield

**105:20 Loughborough, Materials engineering and design, MTech/MPhil/PhD;** supervision available; major research areas: high temp and nuclear materials, materials protection, composites, processing; current and recent projects inc: applied design and development studies, tension perturbations in pliable materials in production machinery, measurements of elastic constants of materials at high temp, assessment of factors affecting quality of strip produced by powder rolling processes, chem kinetics and factors affecting production of fine metal powders from reduction of metallic cpds, high temp oxidation of alloys, performance and behaviour of coatings systems, high-speed electroplating, electroforming, coatings for titanium and refractory metals, mechanical properties of paint films, ductile fracture of metals, fracture of rigid thermoplastics, hybrid composite materials, applications of materials in biomedical eng, electron probe micro-analysis of low atomic number elements, assessment of resinous materials for replication of eng surfaces; laser cutting and welding, injection moulding of metallic and non metallic materials, electronic packaging, engineering ceramics. Contact Professor IA Menzies

**105:21 Manchester, Metallurgy, MSc/PhD**

**105:22 Manchester (UMIST), Corrosion and protection, MSc/PhD**

**105:23 Manchester (UMIST), Metallurgy and materials science, MSc/PhD** See page 468

**105:24 Manchester Poly, Metallurgy, MPhil/PhD (CNA)**

**105:25 Manchester Poly, Polymer technology, MPhil/PhD (CNA)**

**105:26 Newcastle, Metallurgy and engineering materials, MSc/PhD**

**105:27 Newcastle Poly, Materials technology, MPhil/PhD (CNA)**

**105:28 N Staffs Poly, Ceramic technology, MPhil/PhD (CNA);** supervision available for research in: rheology of ceramic materials, mechanical properties of ceramics and glass ceramics, prosthetic applications of ceramics, use of novel raw materials for ceramic applications and glaze stress problems. Contact Dr W Ryan

**105:29 Nottingham, Metallurgy and materials science, MPhil/PhD**

**105:30 Open, Materials science, BPhil/MPhil/PhD**

**105:31 Oxford, Metallurgy and materials science, MSc/DPhil;** supervision available, current research interests inc: mechanical props of and crystal defects of metals, alloys and ceramics; composites, superplasticity, creep, fatigue, fracture; structure and properties of interfaces; crystallography and kinetics of phase transformation; solidification of metals and alloys; amorphous metals and alloys; field-ion microscopy and atom probe analysis; corrosion; hydration and development of strength of cements; defects in and electrical props of semiconductors and devices; magnetic props of materials and microstructure; structure and props of superconducting materials; radiation damage in metals, ceramics, and semiconductors; electronic effects on plasticity of strong solids; materials problems with solid-state batteries; microstructure and props of catalysts; development and application of electron microscopy and micro-analysis to study of microstructure and defects, ultra-high resolution imaging of crystal structures; electron-beam lithography; ultrasonic microscopy; theoretical studies of electronic properties of perfect and imperfect solids; metallurgy in archaeology. Contact Professor Sir Peter Hirsch

**105:32 Poly of Wales, Civil engineering and building, MPhil/PhD (CNA)**

**105:33 Sheffield, Ceramics, glasses and polymers, MScTech/PhD**

**105:34 Sheffield, Metallurgy, MPhil/PhD;** supervision and supporting course work available in wide ranging research areas (typically involving 70 to 80 individual projects) covering new materials and processes, improvements to traditional materials and assessment of behaviour in service; new

matter effect of environment in corrosion fracture fatigue and creep fatigue interactions other studies relate to thermodynamics of alloys diffusion and phase transformations development and evaluation of coating and welding processes Contact Professor GW Greenwood

- 105 35 Sheffield City Poly, *Industrial metallurgy* PhD (CNAAB)  
 105 36 Sheffield City Poly, *Metallurgy* MPhil/PhD (CNAAB)  
 105 37 Southampton, *Civil engineering* MPhil/PhD  
 105 38 South Bank Poly, *Chemical engineering* MPhil/PhD (CNAAB)  
 105 39 South Bank Poly, *Chemical engineering* MPhil/PhD (CNAAB)  
 105 40 South Bank Poly, *Chemical engineering* MPhil/PhD (CNAAB)

relation to constitution processing hist structure and service environment fabrication constitution and evaluation of metal matrix composite materials *solidification processing and phase transformation* development of atomiser with ultrasonic gas delivery dies for production of rapidly

materials adv techniques in use inc surface analysis by x ray photoelectron spectroscopy (XPS) and scanning auger microscopy (SAM) *analytical electron microscopy* Contact Profesor AP Miodownik

- 105 41 Teesside Poly, *Metallurgy* MPhil/PhD (CNAAB)  
 105 42 Thames Poly, *Materials science and physics* MPhil/PhD (CNAAB)  
 105 43 Wales (Bangor), *Electrical materials science* MSc/PhD  
 105 44 Wales (Cardiff), *Metallurgy and materials science* MSc/PhD  
 105 45 Wales (Swansea), *Materials engineering* MSc/PhD supervision available research interests inc metal manufacturing technology analysis of fabrication processes by finite element methods microstructure evolution during metal forming processes *properties of metals* creep and fracture of metals and alloys restoration of properties by reheat treatment of creep damaged super alloys creep life prediction and remnant life assessment for steels and super alloys creep of welded

tures and mechanical properties of bone molecular structures of polymers Contact Dr WJ Evans

- 105 46 Warwick, *Physics* MSc/MPhil/PhD  
 105 47 Wolverhampton Poly, *Materials and physics* MPhil/PhD (CNAAB)

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course A research project (normally lasting three months) with submission of a written report dissertation or thesis is normally a part of these courses

- 105 48 Birmingham, *Metallurgical processes and management* MSc(Eng) 1c v r f t max 3 yrs p-t (hons)

processes, melt treatments, casting eng); surface heat treatment processes (design aspects of surface hardening, thermal techniques, controlled atms, ferritic thermochem treatments, austenitic thermochem treatments, metallising treatments); deformation behaviour and mechanical working of metals (production of mild steel sheets, secondary working processes, physical metallurgy of steel); business and financial management in metals industry (corporate finance, management finance, metal markets and materials purchasing); major research project (SERC). Contact Professor RE Smallman

- 105:49 Brunel, *Non-destructive testing of materials*, MSc/Diploma, 1 yr f-t (hons deg in physics, eng or related subj or approved qual req for MSc, lower quals req for Diploma); adv professional education; syllabus: mechanical properties of materials, electrical and magnetic properties of materials, thermal properties of materials, optics, acoustics, ionising radiation, defects in materials, radiological testing, ultrasonic testing, visual methods of testing, thermal methods, penetrant methods, electrical and magnetic methods, pressure and leak testing, gen considerations. Contact Professor DC Imne**
- 105:50 Brunel, *Welding and adhesive bonding of engineering materials*, MSc/Diploma**
- 105:51 City of London Poly, *Corrosion science and engineering*, MSc/Diploma**
- 105:52 Cranfield, *Aerospace materials engineering*, MSc**
- 105:53 Cranfield, *Metallurgical engineering*, MSc**
- 105:54 Cranfield, *Polymer engineering*, MSc**
- 105:55 Dundee, *Physics and technology of amorphous materials*, MSc**
- 105:56 Lancaster, *New polymer synthesis*, MSc**
- 105:57 Leeds, *Engineering ceramics*, MSc See page 468**
- 105:58 Loughborough, *Materials protection*, MSc/ALUT**
- 105:59 Manchester (UMIST), *Corrosion science and engineering*, MSc/Diploma**
- 105:60 Manchester (UMIST), *Materials protection*, MSc/ALUT**
- 105:61 Manchester (UMIST), *Metallic and ceramic materials*, MSc/Diploma See page 468**
- 105:62 Newcastle, *Mechanical properties of solids*, MSc**
- 105:63 Newcastle Poly, *Materials engineering*, MSc (CNA)**
- 105:64 Royal CA, *Polymer engineering and design*, MDEs/MTech/Certificate**
- 105:65 Sheffield, *Advanced metallurgy*, MMet; taught course, 1 yr f-t; p-t course by arrangement; min entry req second-class hons deg or equiv in metallurgy, materials science, eng, physics or chem, or following Diploma in Metallurgy - see course (105:79); course has structured options permitting some specialisation in topics ranging from techniques for laboratory research, through subjects related to industrial research and development to those of particular concern in production management, lectures are supplemented by practical demonstrations, problem solving classes and by case studies, research project or critical survey and evaluation of industrial area forms basis of dissertation which is essential component of course. Contact Professor GW Greenwood**
- 105:66 Sheffield, *Ceramics*, MScTech/Diploma See page 469**
- 105:67 Sheffield, *Glasses*, MScTech/Diploma See page 469**
- 105:68 Sheffield, *Materials*, MScTech/Diploma See page 469**
- 105:69 Sheffield City Poly, *Metallurgical process management*, MSc (CNA)**
- 105:70 Strathclyde, *Instrumental methods of analysis*, MSc/Diploma**
- 105:71 Thames Poly, *Electronic materials and devices*, MSc (CNA)**
- 105:72 Thames Poly, *Molecular science of materials*, MSc (CNA)**
- 105:73 Ulster, *Polymer engineering*, MSc**
- 105:74 Wales (Swansea), *Metal manufacturing technology*, MSc, 1 yr f-t (deg in physical sciences, eng or related topic req), course inc foundry techniques, metallurgy of fabrication processes, numerical methods, metal forming analysis, computer-based drafting and machining, gas turbine manufacturing technology, technological and econ trend analysis, industrial participation; research project and dissertation. Contact Dr WJ Evans**
- 105:75 Warwick, *Solid state physics and materials science*, MSc/Diploma**





**IMPERIAL  
COLLEGE**  
of Science and Technology



Department of  
**Metallurgy and Materials Science**

**Metallurgy and Materials Science, MPhil/PhD**, supervision available, current research interests in following areas, some specific projects named, *chem and process metallurgy* reduction of iron ore with gases, carbide processing, production of carbide materials from colliery waste, *electrometallurgy* chem and electrochem reactions in molten salts, *corrosion* high temp corrosion of coal-fired power station heat exchanger tubes, *physical processing of metals* physical properties of continuous casting fluxes, deformation of two-phase alloys, *phase transformations and phase equilibria* dynamic observations of solid state phase transformations, *structure-property relationships* microchem and deformation characteristics of IMI 829, fatigue crack initiation and growth in Al-Li based alloys, *fracture behaviour of metallic materials* flake graphite cast iron, non-metallic materials electrodeposition of refractory metals, toughening mechanisms in zirconia ceramics, *electrical materials* scanning electron microscope cathodoluminescent and conductive mode analyses of semiconducting materials and multilayer structures

Details from: Professor D W Pashley, Department of Metallurgy and Materials Science, Imperial College, London SW7 2BP.

## UNIVERSITY OF LEEDS

### Engineering Ceramics, MSc

A one-year advanced taught course with experimental project work, to provide post-graduate level education in aspects of ceramic science and technology fundamental to the development, production and application of advanced ceramic materials in mechanical and electrical engineering.

**Core component:** supplies the essential basis of understanding for the materials' processing, structures and properties. **Two options:** opportunity to specialise in the mechanical engineering or electrical engineering properties and uses of these materials, in accordance with the career intended.

The course includes laboratory, computing, electron optical work, industrial seminars and an experimental project to provide first-hand experience of these materials.

For further information contact:  
Dr F L Riley, Department of Ceramics  
Leeds University, Leeds LS2 9JT



## University of Manchester and UMIST

### Department of Metallurgy and Materials Science



**MSc/PhD by Research** Currently supervised topics include mechanical behaviour and fracture, ceramic materials, powder metallurgy, phase transformations and microstructure, solidification, electron optics, interfaces, thermal transport properties, oxidation and corrosion, chemical metallurgy, metal production, materials processing, phase equilibria, alloy thermodynamics, process metallurgy, electronic materials.

**MSc (Metallic and Ceramic Materials) Course** A one-year course by examination and dissertation is available to suitably qualified graduates and consists of two terms of lectures, laboratory classes and tutorials followed by a six-month supervised research project.

*Further details from:*

Dr F H Hayes,  
Joint University and UMIST  
Metallurgy Building  
Grosvenor Street  
Manchester M1 7HS

# MATERIALS AT SHEFFIELD

Department of Ceramics, Glasses and Polymers  
University of Sheffield

## Postgraduate Courses

The Department of Ceramics, Glasses and Polymers offers a range of postgraduate courses in the following disciplines:

### Postgraduate Courses – Diploma/MScTech

Taught courses involving lectures, practical work, seminars and industrial visits are available in the following disciplines

Ceramics

Glasses

Polymers and Composites

For further details write to

Professor J E Bailey

Department of Ceramics, Glasses and Polymers

University of Sheffield

Elmfild, Northumberland Road

Sheffield S10 2TZ



# 106 Planning

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.

- 106:1 Birmingham, *Urban and regional studies*, MSc/Sc, MPhil/PhD
- 106:2 Birmingham Poly, *Planning and landscape*, MPhil/PhD (CNAA)
- 106:3 Bradford, *Environmental sciences*, MPhil/PhD
- 106:4 Bristol Poly, *Town and country planning*, MPhil/PhD (CNAA)
- 106:5 Cambridge, *Land economy*, MPhil/PhD, supervision available, research interests: analysis of processes of regional, urban and rural change primarily in economically-adv. nations; stress on interactions, within local framework, of private and public agents that shape local econ., political and environmental change; seeks to analyse and evaluate range of public policy mechanisms that attempt to modify processes of local change; staff interests inc. urban policy analysis, urban-rural links in employment, regional policy, control of local financial relationships, housing policy, operation of land markets, comparative land use, land development process, British agricultural policy; specialist library access to Univ. computing facilities. Contact Dr ID Hodder
- 106:6 Coventry (Lanchester) Poly, *Urban and regional planning*, MPhil/PhD (CNAA)
- 106:7 Duncan of Jordanstone CA (Dundee), *Architecture and town planning*, MSc/PhD (Dundee)
- 106:8 Dundee, *Town and regional planning*, MSc, PhD
- 106:9 East Anglia, *Environmental sciences*, MPhil/PhD
- 106:10 Edinburgh, *Urban design and regional planning*, MPhil/PhD
- 106:11 Essex IHE, *Built environment*, MPhil/PhD (CNAA)
- 106:12 Glasgow, *Town and regional planning*, MPhil/PhD, supervision and doctoral programme available, broad research interests: evolution and workings of urban and regional systems in which planning intervenes; planning policies for physical environment, local economy, housing and social values, *spatially*, regional, urban and rural development; planning and land development; new technology, transport planning, planning theory and techniques. Contact Professor DV Donnison
- 106:13 Heriot-Watt, *Housing*, MSc, PhD, supervision available, major research interests: legal and social aspects of housing policy, ethnic minorities, tenant participation, historical evolution of housing policies, rehabilitation and conservation. Contact John A Craig
- 106:14 Heriot-Watt, *Town and country planning*, MSc/PhD; supervision available, major research interests: legal and social aspects of policy, public participation; comparative studies of operation of planning in European countries and N. America; changing urban hierarchies; historical growth of town and country planning. Contact John A Craig
- 106:15 Kent, *Urban studies*, MPhil/PhD
- 106:16 Leeds Poly, *Town planning*, MPhil/PhD (CNAA)
- 106:17 Liverpool, *Civic design*, MPhil/PhD
- 106:18 Liverpool Poly, *Town and country planning*, MPhil/PhD (CNAA)
- 106:19 London (LSE), *Regional and urban planning studies*, MPhil/PhD
- 106:20 London (UC), *Architecture and planning*, MPhil/PhD
- 106:21 Manchester, *Town and country planning*, MPhil/PhD
- 106:22 Newcastle, *Town and country planning*, MSc/MPhil/PhD
- 106:23 Nottingham, *Planning studies*, MPhil/PhD
- 106:24 Open, *Urban and regional research*, BPhil/MPhil/PhD
- 106:25 Oxford Poly, *Planning*, MPhil/PhD (CNAA)
- 106:26 Poly of Central London, *Environment*, MPhil/PhD (CNAA)
- 106:27 Poly of North London, *Environmental design*, MPhil/PhD (CNAA)
- 106:28 Reading, *Planning*, MPhil/PhD
- 106:29 Sheffield, *Town and regional planning*, MA/PhD



- 106:50 Liverpool, *Metropolitan planning*, MA  
 106:51 Liverpool, *Regional science*, MA  
 106:52 London (Birkbeck), *Urban and regional planning studies*, MSc  
 106:53 London (LSE), *Regional and urban planning studies*, MSc  
 106:54 London (UC), *Town planning*, MPhil  
 106:55 London (UC), *Urban development planning*, MSc  
 106:56 Loughborough, *Industry and public planning policy*, MSc  
 106:57 Manchester, *Town and country planning*, BTP  
 106:58 Manchester, *Town and country planning*, MTPI  
 106:59 Manchester, *Town and country planning*, MTP  
 106:60 Newcastle, *Planning studies*, MA  
 106:61 Newcastle, *Town and country planning*, MPhil  
 106:62 Newcastle Poly, *Urban studies*, MA/Diploma (CNA A)  
 106:63 Nottingham, *Environmental planning*, MA/Diploma  
 106:64 Nottingham, *Environmental planning for developing countries*, MA  
 106:65 Nottingham, *Urban design for developing countries*, MA/Diploma  
 106:66 Oxford Poly, *Urban design*, MA (CNA A) See page 475  
 106:67 Oxford Poly, *Urban planning*, MSc/Diploma See page 475  
 106:68 Oxford Poly, *Urban planning studies*, MSc (CNA A) See page 475  
 106:69 Poly of Central London, *Transportation planning and management*, MSc (CNA A)  
 106:70 Poly of Central London, *Urban design*, MA (CNA A)  
 106:71 Reading, *Environmental planning*, MPhil/Diploma  
 106:72 Robert Gordon's IT (Aberdeen), *Rural and regional resources planning*, MSc (Aberdeen)  
 106:73 Sheffield, *Town and regional planning*, MA/Diploma, 2 yrs f-t (MA), 6 terms f-t (Diploma); 2 yr course provides an education relevant to practice of planning and aims to promote both academic excellence and professional competence; in second yr opportunities for specialist and research training are provided which build on knowledge of, and professional training in, core of planning discipline provided in first part of course; course is fully recognised by RTPI and inc 2 periods of supervised work experience placements in local planning authorities undertaken as integral part of course; *course content: terms 1 and 2: basic grounding in planning, placement; term 3: planning policy at various spatial scales, placement; term 4: planning in action in terms of current planning practice (UK and overseas); term 5: units from wide range of sp subj options; term 6 (Diploma): project; term 6 and vac (MA): dissertation or major design.*  
 106:74 Stirling, *Housing administration*, MSc  
 106:75 Strathclyde, *Regional development*, MSc/Diploma See page 475  
 106:76 Strathclyde, *Urban and regional planning*, MSc/Diploma, 2 yrs f-t (MSc), 3 yrs p-t (Diploma) (hons deg in geog, economics, architecture, land management or other relevant subj req; HND with experience for Diploma); *course content: module 1: basic classes (theory and phil of planning, process and practice of planning, disciplines in planning, methods in planning), applied studies to develop understanding of subjs and introduce skills of analysis and plan and policy making, comparative planning; module 2: choice of options from: strategic policy making, regional planning, physical planning issues in developing nations, developmental control, urban design, planning for pedestrians, hist of planning, ideology of planning; comparative planning, thesis; module 3: adv classes, adv applied studies; thesis for MSc and dissertation for Diploma; RTPI recognised. Contact Professor VA Wannop See page 475*  
 106:77 Strathclyde, *Urban development*, MSc/Diploma See page 475  
 106:78 Sussex, *Urban and regional studies*, MA  
 106:79 Wales (UWIST), *Town planning*, MSc  
 106:80 Wales (UWIST), *Urban planning in developing countries*, MSc  
 106:81 York, *Conservation studies*, MA

## Certificates and diplomas

- 106:82 Birmingham, *Urban and regional studies*, Diploma  
 106:83 Birmingham Poly, *Landscape architecture*, Diploma  
 106:84 Birmingham Poly, *Environmental management*, Diploma  
 106:85 Birmingham Poly, *Housing studies*, Diploma  
 472 : IV Engineering and applied sciences

- 106 86 Birmingham Poly, *Town planning*, Diploma  
 106 87 Bristol Poly, *Housing*, Diploma  
 106 88 East Anglia, *Environmental sciences*, Diploma  
 106 89 Edinburgh, *Planning studies (developing countries)*, Diploma  
 106 90 Edinburgh, *Urban design and regional planning*, Diploma  
 106 91 Essex IHE, *Environmental planning*, Diploma  
 106 92 ... ..  
 106 93 ... ..

Contact John A Craig

- 106 94 Heriot Watt, *Town and country planning*, Diploma 2 yrs f t 3 yrs p t *foundation section* theory

- 106 95 Liverpool Poly, *Environmental planning* Diploma  
 106 96 Liverpool Poly, *Environmental planning*, Diploma  
 106 97 ... ..  
 106 98 ... ..  
 106 99 ... ..  
 106 100 Oxford Poly, *Planning*, Diploma See page 475  
 106 101 Oxford Poly, *Urban design*, Diploma See page 475  
 106 102 Poly of Central London, *Town planning*, Diploma  
 106 103 Poly of Central London, ... .. Diploma  
 106 104 ... ..  
 106 105 ... ..  
 106 106 Snerreia City Poly, *Housing administration* Diploma (CNA)  
 106 107 Sheffield City Poly, *Urban and regional planning*, Diploma (CNA)  
 106 108 ... ..  
 106 109 ... ..  
 106 110 ... ..

# UNIVERSITY OF MANCHESTER

## DEPARTMENT OF TOWN & COUNTRY PLANNING

### PLANNING LANDSCAPE RESEARCH CONTINUOUS PROFESSIONAL DEVELOPMENT

This multi-disciplinary Department offers a wide range of programmes in the planning and landscape fields; including professionally-qualifying courses, specialist Master's Degrees, post-experience provision and research studies.

#### **MTPI/BTP**

(Two years full-time)

RTPI recognised professional courses for holders of hon's degrees in related disciplines.

#### **MTP**

(Two years full-time)

RTPI recognised advanced course for holders of 3-year hon's degrees in Town and Country Planning.

#### **MA/MPhil/PhD**

Research programmes in planning and landscape topics, concerning both British and overseas problems.

#### **MLD/BLD**

(Two years full-time)

Landscape Institute-recognised professional course in Landscape Design for holders of hon's degrees in related disciplines.

#### **MA(LM)**

(One year full-time or two years part-time)

Professional course for graduates with experience in Landscape Management.

#### **MA(LD)**

(One year full-time)

Advanced course for qualified landscape architects.

**Enquiries and applications to:** Graduate Admissions Tutor, Department of Town & Country Planning,  
University of Manchester, Manchester M13 9PL

Tel: 061-273 3333 ext 3626 (Planning), ext 3628 (Landscape)

## University of Newcastle upon Tyne

### Town & Country Planning Landscape Design Urban Design

Degree  
MPhil/MSc

#### **Length of course**

24 months full-time (MPhil),

12 months full-time

12 months part-time (MSc)

#### **Description of courses**

The MPhil courses provide a professional education in either planning or landscape which is fully recognised by the professional institutions concerned. In both areas the full range of subjects required for this purpose is covered and in addition special training in research methods and opportunities for specialised study are provided.

The MSc is a research degree: the courses provide individual facilities for advanced study and research in depth of particular aspects of the fields of planning, landscape, urban design, economic planning and computing for planning purposes.

#### **All applications and enquiries to**

Head of Department, Department of Town & Country Planning, The University Newcastle upon Tyne NE1 7RU

## UNIVERSITY OF BIRMINGHAM



### **MSocSc: Urban and Regional Studies**

### **MSocSc: Tourism and Leisure Studies**

The Centre is both a multidisciplinary research institute and a postgraduate teaching department. Current research includes work on Housing; Recreation and Tourism, Employment, Industrial Location and Planning. The Centre offers a wide range of opportunities for study for postgraduate degrees. For the MSocSc degree by coursework and dissertation, students are required to follow one of the Centre's specialisms: Housing, Leisure and Tourism, or Industry, Employment and Planning.

**Entrance requirements:** good honours degree in an appropriate subject, or professional qualifications and experience.

**Enquiries about this or other courses to:** the Graduate Admissions Tutor, Centre for Urban and Regional Studies, J G Smith Building, University of Birmingham, PO Box 363, Birmingham B15 2TT.  
Telephone 021-472 1301 ext 2696

## UNIVERSITY OF STRATHCLYDE



**MSc/Diploma in URBAN DEVELOPMENT**  
**MSc/Diploma in REGIONAL DEVELOPMENT**

*Full time courses of 12 months for MSc  
and 9 months for the Diploma*

Significant changes in planning practice in the United Kingdom and in advanced industrialised countries have followed deepening economic problems, slower urban investment and a renewed emphasis on urban renewal. These changes are the basis for the course on **URBAN DEVELOPMENT** which is also relevant to newly industrialising countries in which rapid urbanisation is associated with major projects of urban redevelopment and urban expansion.

Within the EEC and in newly industrialising countries regional development programmes and regional planning are

**MSc/Diploma in URBAN AND REGIONAL PLANNING**

*Full time courses of 21 months which meet the professional requirements of the Royal Town Planning Institute*

*For qualification as a Chartered Planner*

## Postgraduate awards?

Read the  
editorial on  
pages 17-22

## Abbreviations

See pages 31-33

**oxford  
polytechnic**

DEPARTMENT OF TOWN PLANNING

## PLANNING STUDIES IN OXFORD

The Polytechnic offers a wide range of planning programmes leading to professional qualifications, specialist Masters Degrees and Diplomas, and to advanced research degrees. Whether you are seeking initial qualifications or are in mid-career wishing to develop your skills and knowledge, these programmes can help you realise your full potential. All programmes may be completed part time or by discontinuous study.

**MSc in Urban Planning Studies**  
(One year full-time)  
with choice of major specialisation in:  
Urban Development and Planning  
Regional Development and Planning  
Urban Planning Economics  
Social Planning

**MSc/Diploma in Urban Planning**  
(Two-year full time RTPI recognised)  
offering the above specialisations and a foundation year

**MA in Urban Design**  
(Fifteen months full time RIBA recognised)

**Diploma in Planning**  
(One year full time)  
RTPI recognised in conjunction with approved first degrees in Planning (The transport major is CPT recognised)  
Choice of major specialisation in:  
Housing  
Public Transport and Planning  
Industrial and Commercial Development  
Urban Conservation and Design  
Recreational Management and Planning

**Diploma in Urban Design**  
(One or two-year full time Two-year programme RTPI and RIBA recognised)

**MPhil and PhD Programmes** in a wide range of research areas

New opportunities for pursuing interests in both developing and developed countries

*Details from: Graduate Admissions, Department of Town Planning, Oxford Polytechnic, Headington, Oxford OX3 0BP  
Tel: Oxford (0865) 64777 ext. 307*

## 107 Printing and printing technology

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### Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 107:1 London C Printing, Graphic design, MPhil/PhD (CNAAC);** supervision available for research in computer graphics, electronic imagery, computer directed composing, audio visual studies, typography, typeface design and character generation. **Contact B Bedwell**
- 107:2 London C Printing, Printing or graphic technology, MPhil/PhD (CNAAC)**
- 107:3 Manchester Poly, Graphics technology, MPhil/PhD (CNAAC)**
- 107:4 Reading, Typography and graphic communication, MPhil/PhD**
- 107:5 Watford C, Printing and packaging technology, PhD (CNAAC)**

### Certificates and diplomas

- 107:6 London C Printing, Design and media technology, Diploma (CNAAC). 1 yr f-t (deg, grad diploma in art and design or equiv qual req);** *subjs of study:* computer graphics, electronic imagery, computer directed composing, audio visual studies, typography, typeface design and character generation self-directed project in conjunction with set areas of study. **Contact B Bedwell**

# 108 Textile science and technology

## Higher degrees by research

Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the Entrance requirements and periods of study paragraphs in the introductory Postgraduate studies section.

108 1 Huddersfield Poly, *Textile industries*, MPhil/PhD (CNA)

108 2 Leeds, *Textile industries*, MPhil/PhD

108 3 *Leeds, Textile industries*, MPhil/PhD

108 4 *Leeds, Textile industries*, MPhil/PhD

fabrics textile design and textile economics and management current projects inc fatigue fracture and heat setting of fibres application of microprocessors to textile manufacturing computer aided textile design, structure and properties of non woven fabrics dyeing and finishing mechanics of textile processes (esp yarn spinning (inc open-end) yarn texturing weaving stitch

108 5 *Leeds, Textile industries*, MPhil/PhD

108 6 *Leeds, Textile industries*, MPhil/PhD

108 7 Scottish C Textiles (Glasgow), *Textile technology and clothing technology* MPhil/PhD

108 8 Strathclyde, *Pure and applied chemistry* MSc/PhD

## Higher degrees by instruction

Candidates are expected to hold a good honours degree in the subject of the course. A research project (normally lasting three months) with submission of a written report, dissertation or thesis is normally a part of these courses.

108 9 Leeds, *Textile dyeing and finishing*, MSc

108 10 Leeds, *Textile science and engineering*, MSc

108 11 Manchester (UMIST), *Textile technology*, MSc/DipTechSci 1c yr f t 2c-4 yrs p-t course content structure properties and manufacture of textile materials inc recent developments in methods of manufacture in addn to knitting and weaving stitch bonding needle bonding and other methods it processing weaving knitting dyeing and physics choice of options practical work

108 12 *Manchester (UMIST), Textile technology*, MSc/DipTechSci

## Certificates and diplomas

108 13 Leeds, *Clothing technology*, Diploma

108 14 Leeds, *Textile design* Diploma

108 15 *Leeds, Textile design* Diploma

108 16 *Leeds, Textile design* Diploma

108 17 *Leeds, Textile design* Diploma

108 18 *Leeds, Textile design* Diploma



# 109 Total technology

## Higher degrees by research

*Candidates are expected to hold a good honours degree in a subject relevant to that in which they propose to carry out research. Information about the periods of study required for research degrees is given in the 'Entrance requirements and periods of study' paragraphs in the introductory 'Postgraduate studies' section.*

- 109:1** Aston, *Total technology*, MPhil/PhD
- 109:2** Bradford, *Electrical and electronic engineering*, PhD
- 109:3** Cranfield, *Fluid engineering: total technology*, PhD
- 109:4** Lancaster, *Engineering*, MPhil/PhD
- 109:5** Loughborough, *Total technology*, PhD
- 109:6** Manchester (UMIST), *Total technology*, MSc/PhD *See below*
- 109:7** Sheffield City Poly, *Industrial metallurgy*, PhD (CNAA)
- 109:8** Strathclyde, *Marine technology*, PhD
- 109:9** Strathclyde, *Total technology*, PhD

UMIST/UNIVERSITY OF MANCHESTER

## PhDs IN INDUSTRY

### Total Technology All Engineers & Applied Scientists

Applications are invited from suitably qualified candidates for SERC studentships to undertake research leading to the PhD degree, while collaborating with major industrial organisations.

The successful applicants will join the UMIST/University of Manchester Total Technology programme. This programme has been designed to ensure that potentially outstanding young graduates receive a broad training, in addition to their doctoral research investigation, such that they are able to fill senior positions within industry at an early stage in their career.

For many projects, the collaborating industrial concern will financially supplement the research studentships.

If you are already employed it is possible in certain circumstances to remain on full salary whilst undertaking this type of PhD research in your present company.

Further information, application forms or informal discussions-  
can be arranged by contacting:

Dr R Leonard, Head of Total Technology,  
UMIST, PO Box 88, Manchester M60 1QD  
Tel 061-236 3311

## Institutions

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The number of transformed cells was determined by the number of colonies obtained on the selective medium. The results are the mean of three independent experiments. Error bars represent the standard deviation.

# UNIVERSITY OF ABERDEEN

## OPPORTUNITIES FOR POSTGRADUATE STUDY

The University welcomes applications for Postgraduate Study by Research in all the Departments in its six Faculties of Arts and Social Sciences, Science (including Agriculture, Forestry), Engineering, Divinity, Law (including Land Economy), and Medicine. In addition, it offers the following Taught Postgraduate Courses:

### Taught Postgraduate Courses (Masters)

Agricultural Economics, Crop Science, Animal Nutrition, Animal Production, Modern Botanical Methods, Silicate and Solid State Chemistry, Ecology, Immunobiology, Information Technology, Mathematics, Medical Physics, Physics, Instrument Design, Petroleum Geology, Clinical Pharmacology, Rural and Regional Resources Planning, Soil Science, Biblical Languages, Christianity in the Non-Western World, Education, English Language as a Literary Medium, Modern German Studies, Scottish Literature, Strategic Studies, Analytical Chemistry, Human Nutrition, Region and Nation in Literature, Electrical Power Engineering, Land Economy, Forest Management, Music Performance, Commercial Law, Environmental Law, Rights, Property and Justice, Medico-Legal Problems, Roman Law and Roman-Dutch Law.

### Diplomas and Certificates

Accountancy Studies, Advanced Chemistry, Agricultural Economics, Animal Nutrition, Applied Social Studies, Clinical Pharmacology, Education, Forestry, Immunology, Land Economy, Legal Practice (Scots Law), Mathematical Sciences, Medical Physics, Medical Radio-Diagnosis, Modern Botanical Methods, Pastoral Studies and Applied Theology, Philosophy, Psychotherapy, Soil Science, Analytical Chemistry, Electrical Power Engineering, Advanced Physics, Marine and Fisheries Science.

Detailed information about each of the above courses available from the Postgraduate Office, University of Aberdeen, Aberdeen AB9 1FX.

# ASTON UNIVERSITY

*Aston has restructured its research and now has opportunities for research students in the following areas:*



## RESEARCH

*Artificial Intelligence and Expert Systems  
Chemical Engineering  
Civil Engineering  
Computer Integrated Manufacture  
Computer Science  
Electrical and Electronic Engineering and  
Applied Physics  
Energy  
Geological Sciences  
Interdisciplinary Higher Degrees Scheme (IHD)  
Management  
Materials with Novel Properties  
Mathematics  
Mechanical and Production Engineering  
Modern Languages  
Molecular Sciences  
Pharmaceutical Sciences  
Vision Sciences*

*Postgraduate courses are offered in Advanced Manufacturing Technology, Business, CAD, Computer Science with Applications, IT, Personnel, Public Sector Management, English for Specific Purposes, and for the MBA.*

*Further details from Research or Course Admissions Tutors in the appropriate department or from the Registry.*

Aston Triangle, Birmingham B4 7ET Telephone 021-359 3611 Telex 336997 • G

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## **Aberdeen**

University of Aberdeen, University Office,  
Regent Walk, Aberdeen AB9 1FX  
Telephone: Aberdeen (0224) 40241

Further information: Secretary

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## **Architectural Assoc S (London)**

Architectural Association School of  
Architecture, 34-6 Bedford Square, London  
WC1B 3ES  
Telephone: 01-636 0974

Further information: Graduate School  
Administrator

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## **Aston**

University of Aston in Birmingham, Gosta  
Green, Birmingham B4 7ET  
Telephone: 021-359 3611

Further information: Registry

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## **Bath**

University of Bath, Claverton Down, Bath  
BA2 7AY  
Telephone: Bath (0225) 61244  
Further information: Secretary and Registrar

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## **Bath CHE**

Bath College of Higher Education, Newton  
Park, Bath BA2 9BN  
Telephone: Saltford (02217) 3701  
Further information:

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## **Belfast**

Queen's University of Belfast, University  
Road, Belfast BT7 1NN  
Telephone: Belfast (0232) 245133  
Further information: Secretary

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# **BATH COLLEGE OF HIGHER EDUCATION**

Bath College of Higher Education offers the opportunity to study and live in one of the most attractive cities in the South West of England. Two sites in Georgian Bath and the College centre at Newton Park on the western edge of the city provide a combination of urban and rural amenities. The College possesses a modern library, teaching and sports facilities for the use of undergraduate and postgraduate students.

### **Postgraduate Courses in the Faculty of Education**

#### **Postgraduate Certificate in Education (University of Bristol)**

The College offers one-year programmes of initial teacher training for appropriately qualified graduates, validated by the University of Bristol. These are courses for intending secondary school teachers of home economics, music, rural and environmental science, and a course in primary education.

Each course leads to the award of the Postgraduate Certificate in Education and qualified teacher status. Excellent career prospects exist for those who complete the course successfully, both in state schools and in the private sector.

### **Master of Education (CNAA) part-time**

The MEd Degree (three-year part-time) is designed principally for primary and secondary teachers and advisory teachers who wish to reflect upon, analyse and improve their practice in the school or classroom. It has particular relevance to those whose professional activities involve them in, or across, the curriculum areas of art and music, language, home economics and science.

### **Postgraduate Study in the Faculty of Home Economics, Science and Humanities**

#### **MPhil/PhD by Research (CNAA) part-time**

Applications are invited from candidates who wish to pursue postgraduate research in the following subjects:

- Geography (physical or human)
- English
- Environmental science
- Home economics, especially food studies aspects
- History

Candidates will be expected to have a good honours degree or relevant experience in their chosen area of study.

**Enquiries and applications to:** The Registrar, Bath  
College of Higher Education, Newton Park, Newton  
St Loe, Bath BA2 9BN  
Telephone Saltford 02217 3701

# POSTGRADUATE STUDY AT THE UNIVERSITY OF BIRMINGHAM



The University offers a wide range of facilities for study towards postgraduate degrees, diplomas and certificates including research opportunities and taught courses. Its leafy campus conveniently near the city centre, at the heart of England, comprises all the academic, cultural and sporting facilities to be expected of one of Britain's largest universities.

Research facilities are available in most disciplines for supervised research leading to the degrees of PhD and MPhil (2 years full time, 4 years part time), MSc, MPhil (Eng), MPhil (Arts), LL.M., M.Jur. and MPhil (Ed) (1 year full time, 2 years part time) and MPhil (Commerce and Social Science) (2 years full time, 4 years part time). These are normal minimum periods of registration which may vary in individual cases.

Taught courses are provided for the following qualifications:

**MSc or MSc(Eng)**  
Applied Genetics  
Applied Geophysics  
Applied Radiation Physics  
Biochemical Engineering  
Brewing Science  
Clinical Psychology (two-year course)  
Computer Science  
Ecology and Utilization of Plant  
Genetic Resources  
Construction Management  
Engineering Production and Management  
(including options in Manufacturing  
Management and Technology,  
Industrial Management and Quality  
and Reliability Engineering)  
Flexible Manufacturing Systems  
Foundation Engineering  
Highway and Traffic Engineering  
Highway Engineering for Development  
Countries  
Hydrogeology  
Immunology  
Machine Tool and Manufacturing  
Technology  
Metallurgical Manufacturing Processes  
and Management  
Meteorology and Climatology  
Nursing Studies  
Operational Research  
Process Biotechnology  
The Physics and Technology of Nuclear  
Reactors  
Thermodynamics and Related Studies  
Toxicology  
Traffic Engineering for Development  
Countries  
Transportation and Traffic Planning  
Water Resources Technology  
Work Design and Ergonomics

**MA**  
African Studies  
Applied English Linguistics  
Archaeological Practice  
Byzantine Studies  
Chaucer Studies  
Contemporary Cultural Studies  
Cuneiform Studies  
European Culture and Society  
Medieval Archaeology  
Music  
Music - Theatre  
Philosophy  
Physical Education  
Religion and Culture  
Russian and East European Studies  
Russian History, Language or  
Literature  
Special Applications of Linguistics  
Synoptic and Statistical Climatology  
Shakespeare Studies  
Tudor History

**MSocSc**  
Accounting and Development Finance  
Development Administration  
Development Finance  
Economic and Social History  
Economics  
Heritage Management  
Industrial Archaeology  
Local Government and Health  
Service Studies  
Mental Disorder Studies  
Money, Banking and Finance  
Political Science  
Race and Education  
Russian and East European Studies  
Social Administration

Social Services Management  
Social Work  
Social Policy and Politics of Western  
Industrialized Society  
Sociology  
Socio-Legal Studies  
Tourism and Leisure Studies  
Urban and Regional Studies  
West African Studies  
\*And Diploma

**MBA**  
Business Administration  
\*And Diploma

**MIS**  
International Studies  
**MCDH**  
Community Dental Health

**MDentSc**  
Dentistry  
**MEd**  
Education  
Educational Psychology

**Diplomas**  
African Studies  
Applied English Linguistics  
Development Education  
English Local History  
Linguistics and Architecture  
Practical Archaeology  
Pastoral Studies  
Social Sciences  
Special Education Difficulties in  
Learning, Emotional and Behaviour  
Difficulties Visually Handicapped  
Hearing Impaired  
Theology

Detailed information is available on all these facilities and on how to apply. Write, saying what subject of study you are interested in to: The Registrar (PG), University of Birmingham, PO Box 363, Birmingham B15 2TT, U.K.  
Telex: 338938 SPAPHYG

Course advertisement

## ***Birmingham***

University of Birmingham, PO Box 363,  
Birmingham B15 2TT  
Telephone: 021-472 1301

Further information: Assistant Registrar of  
Faculty

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## ***Birmingham Poly***

City of Birmingham Polytechnic, Perry Barr,  
Birmingham B42 2SU  
Telephone: 021-356 6911

Further information: Head of appropriate  
department

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## ***Bishop Grosseteste C (Lincoln)***

Bishop Grosseteste College, Lincoln LN1 3DY  
Telephone: Lincoln (0522) 27347

Further information: Admissions Secretary

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## ***Blackburn C***

Blackburn College, Feilden Street, Blackburn,  
Lancashire BB2 1LH  
Telephone: Blackburn (0254) 55144

Further information: Registrar

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## ***Bolton IHE***

Bolton Institute of Higher Education, Deane  
Road, Bolton BL3 5AB  
Telephone: Bolton (0204) 28851

Further information: Head of Department

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## ***Bradford***

University of Bradford, Richmond Road,  
Bradford BD7 1DP  
Telephone: Bradford (0274) 733466

Further information: Secretary of School

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# **UNIVERSITY OF BRADFORD**

**Courses leading to diplomas or higher degrees:**

Archaeological Studies  
Business Administration  
Chemical Engineering  
Civil & Structural Engineering  
Civil Engineering  
Clinical Pharmacy  
Communications Engineering  
Computing  
Control Engineering  
Economics  
Electrical and Electronic Engineering  
Electrical Engineering (Total Technology)  
Electrical Power Applications  
Electronics and Communication Engineering  
Interpreting and Translating  
Microcomputer Systems  
Microprocessor Engineering  
National Development and Project Planning  
Optometry  
Peace Studies  
Pharmacology

Power Electronics  
Power Systems Engineering  
Race Relations and Community Studies  
Radio Frequency and Microwave Engineering  
Scientific Methods in Archaeology  
Social and Community Work Studies  
Structural Engineering  
Transportation  
Women's Studies (Applied)

Further information about these courses, and  
details of research work throughout the  
University are given in the Postgraduate  
Prospectus available from:

**The Registrar and Secretary**  
(Ref. CRAC)  
**University of Bradford**  
**Bradford**  
**West Yorkshire BD7 1DP**

### **Bradford and Ilkley CC**

Bradford and Ilkley Community College Great  
Horton Road Bradford West Yorkshire  
BD7 1AY  
Telephone Bradford (0274) 753026  
Further information Admissions Officer

### **Bretton Hall CHE**

Bretton Hall College of Higher Education  
West Bretton Wakefield West Yorkshire  
WF4 4LG  
Telephone Bretton (092 485) 261  
Further information Secretary for In Service  
Education

### **Bridgwater C**

Bridgwater College Bath Road Bridgwater  
Somerset TA6 4PZ  
Telephone Bridgwater (0278) 455464  
Further information Director

### **Brighton Poly**

Brighton Polytechnic, Moulsecoomb Brighton  
BN2 4AT  
Telephone Brighton (0273) 693655  
Further information Registrar

### **Bristol**

University of Bristol Senate House Bristol  
BS8 1TH  
Telephone Bristol (0272) 24161  
Further information Registrar and Secretary

### **Bristol Poly**

Bristol Polytechnic Coldharbour Lane  
Fenchay Bristol BS16 1QY  
Telephone Bristol (0272) 656261  
Further information Academic Registrar

### **Brunel**

Brunel University Uxbridge Middlesex  
UB8 3PH  
Telephone Uxbridge (0895) 37188  
Further information Academic Secretary

### **Buckingham**

University of Buckingham Buckingham  
MK18 1EG  
Telephone Buckingham (02980) 814050  
Further information Admissions Office

### **Buckinghamshire CHE**

Buckinghamshire College of Higher Education  
Queen Alexandra Road High Wycombe  
HP11 2JZ  
Telephone High Wycombe (0494) 771417  
Further information Chief Administrative  
Officer

### **Bulmershe CHE (Reading)**

Bulmershe College of Higher Education  
Woodlands Avenue Earley Reading  
RG6 1HY  
Telephone Reading (0734) 661187  
Further information Academic Registrar

### **Camborne SMines**

Camborne School of Mines Trevenson Pool  
Redruth Cornwall TR15 3SE  
Telephone Camborne (0209) 714866  
Further information Registrar

### **Cambridge**

University of Cambridge Board of Graduate  
Studies 4 Mill Lane Cambridge CB2 1RZ  
Telephone Cambridge (0223) 55933  
Further information Secretary



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### **Cambridge Inst Ed**

Institute of Education, Cambridge, Shaftesbury Road, Cambridge CB2 2BX

Telephone: Cambridge (0223) 369631

Further information: Secretary

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### **Cambridgeshire CA & T**

Cambridgeshire College of Arts and Technology, Cambridge CB1 1PT

Telephone: Cambridge (0223) 63271

Further information: Course Tutor

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### **Central SA & D (London)**

Central School of Art and Design, Southampton Row, London WC1B 4AP

Telephone: 01-405 1825

Further information: Registrar

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### **Chelsea SA**

Chelsea School of Art, Manresa Road, London SW3 6LS

Telephone: 01-351 3844

Further information: Senior Administrative Officer

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### **Chester C**

Chester College, Cheyney Road, Chester CH1 4BJ

Telephone: Chester (0244) 375444

Further information: Admissions Secretary

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### **Christ Church C (Canterbury)**

Christ Church College, North Holmes Road, Canterbury, Kent CT1 1QU

Telephone: Canterbury (0227) 65548

Further information: Admissions Tutor

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## **The City University HIGHER DEGREE COURSES**

*The University offers the following postgraduate courses, many of which can be taken on both a full-time and part time basis*

#### **MSc Courses**

Civil Engineering (structures)  
Civil Engineering (highways and transport)  
Water Resources Engineering  
Transport Management  
Information Engineering  
Information Systems and Technology  
Statistics and Operational Research Techniques  
Computer Science  
Industrial and Administrative Sciences  
Information Science  
Business Systems Analysis and Design  
Survey Methods  
Internal Auditing and Management  
Human Communication  
Shipping, Trade and Finance

#### **MBA Courses**

Finance  
Industrial Relations and Personnel Management  
Marketing  
Export Management and International Business  
Computer Management

#### **MA Courses**

Arts Administration  
Arts Management in Education

Librarianship and Arts Administration  
Museum and Gallery Administration  
Communications Policy Studies  
Music Performance Studies  
Law  
Law and Practice  
Journalism

#### **Diploma Courses**

Survey Methods, Shipping, Trade and Finance, Business Systems Analysis and Design, Information Science, Arts Administration, Journalism, Law, Law and Practice, Clinical Communication Studies, Internal Auditing and Management, Actuarial Science, Industrial and Administrative Sciences, Music Information Technology, Diploma for Senior Managers in Highways and Transportation, Information Engineering, Engineering Management

#### **RESEARCH**

The degrees of PhD and MPhil are awarded to candidates upon the successful completion of a course of full-time or part-time research and the submission of a thesis. Facilities for such research are available in all departments. Research may also be undertaken in another approved institution or in an industrial or commercial organisation.

*Application forms and further information are available from the Academic Registrar (Ref CRAC)  
The City University, Northampton Square, London EC1V 0HB. Telephone: 01-253 4399*

## **City**

Further information Academic Registrar

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## **City of London Poly**

City of London Polytechnic, 117 9  
Houndsditch London EC3A 7BU  
Telephone 01 283 1030

Further information Post Graduate Studies  
Unit, 31 Jewry Street London EC3N 2EY

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## **College of Librarianship (Wales)**

College of Librarianship Wales Llanbadarn  
Fawr Aberystwyth Dyfed SY23 3AS  
Telephone Aberystwyth (0970) 3181

Further information Registrar

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## **Cornwall CF & HE**

Cornwall College of Further and Higher  
Education Redruth Cornwall TR15 3RD  
Telephone Redruth (0209) 712911

Further information Registrar

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## **Coventry (Lanchester) Poly**

Coventry Lanchester Polytechnic Priory  
Street Coventry CV1 5FB  
Telephone Coventry (0203) 24166

Further information Academic Registrar

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## **Cranfield**

Further information Secretary and Registrar

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## **Cranfield (Silsoe)**

Silsoe College Silsoe Bedford MK45 4DT  
Telephone Silsoe (0525) 60428

Further information Student Recruitment  
Executive

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## **Crewe and Alsager CHE**

Crewe and Alsager College of Higher  
Education Crewe Road Crewe CW1 1DL  
Telephone Crewe (0270) 583661

Further information Marketing Publicity  
Officer

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## **Croydon C**

Croydon College Fairfield Croydon CR9 1DX  
Telephone 01 688 9271

Further information Principal

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## **Derbyshire CHE (Derby)**

Derbyshire College of Higher Education  
Kedleston Road Derby DE3 1GB  
Telephone Derby (0332) 47181

Further information Registry

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## **Doncaster Met IHE**

Doncaster Metropolitan Institute of Higher  
Education Seawshy Doncaster DN5 7UD  
Telephone Doncaster (0302) 83421

Further information Head of Department of  
Management Studies

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## **Dorset IHE (Poole)**

Dorset Institute of Higher Education  
Wallisdown Road Wallisdown Poole  
BH12 5BB

Telephone Bournemouth (0202) 524111

Further information Academic Secretary

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## ***Duncan of Jordanstone CA (Dundee)***

Duncan of Jordanstone College of Art, Perth  
Road, Dundee DD1 4HT

Telephone: Dundee (0382) 23261

Further information: Student Services Officer

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## ***Dundee***

University of Dundee, Dundee DD1 4HN

Telephone: Dundee (0382) 23181

Further information: Secretary

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## ***Dundee CT***

Dundee College of Technology, Bell Street,  
Dundee DD1 1HG

Telephone: Dundee (0382) 27225

Further information: Depute College Secretary

---

## ***Dunfermline CPE***

Dunfermline College of Physical Education,  
Cramond Road North, Edinburgh EH4 6JD  
Telephone: 031-336 6001

Further information: Secretary

---

## ***Durham***

University of Durham, Old Shire Hall, Durham  
DH1 3HP

Telephone: Durham (0385) 64466

Further information: Registrar and Secretary

---

## ***Ealing CHE***

Ealing College of Higher Education, St Mary's  
Road, Ealing, London W5 5RF

Telephone: 01-579 4111

Further information: Admissions Unit (Room  
982)

---

# **University of Durham**

**Estimated total students 1986/87**  
5,000

**Postgraduate students**  
650

**Teaching staff**  
456 full-time

**Main subject areas**  
Arts; Education; Engineering and  
Applied Science; Middle Eastern and  
Oriental Studies; Sciences; Social  
Sciences

**Further information**  
The Registrar and Secretary  
University of Durham  
Old Shire Hall  
Durham DH1 3HP

Durham is situated in north-east England. London is 250 miles to the south (three hours by train). Edinburgh 120 miles to the north. Newcastle upon Tyne, a city of a million people, is 15 miles away. The cathedral and castle dominate the centre of the small city of Durham. As well as the castle, now University College, the university uses many of the older buildings in the city centre. Some departments and newer colleges stand in parkland nearby.

### **The colleges**

All teaching is given in departments, but every student is a member of a college. The colleges provide accommodation for 80% of students, meals, libraries and social facilities to supplement those provided by the University. The Graduate Society provides for the special needs of graduate students.

### **Academic information**

**Higher degrees** All departments admit students to read for higher degrees, masters doctorates, by research. The department where higher degrees can be obtained only by research and the submission of a thesis are: chemistry, economics, French, German, law, history, palaeography and diplomatic, philosophy, physics, psychology, Russian, Spanish and zoology. The following departments offer taught courses, in addition to degrees by thesis, usually of one year's full-time study: anthropology, engineering and applied science (applied physics, computing, electronics, engineering), archaeology, botany, business studies, classics and ancient history, education, English studies (including TEFL), geography, geological sciences, mathematics, music, Oriental studies, physics, politics, sociology and social policy, and theology.

## **East Anglia**

University of East Anglia Norwich NR4 7TJ

Telephone Norwich (0603) 56161

Further information Registrar and Secretary

---

## **Edge Hill CHE (Ormskirk)**

Edge Hill College of Higher Education St

Helens Road Ormskirk Lancashire L39 4QP

Telephone Ormskirk (0695) 75171

Further information Senior Tutor

---

## **Edinburgh**

University of Edinburgh Secretary's Office

Old College South Bridge Edinburgh

EH8 9YL

Telephone 031-667 1011

Further information Secretary to the University

---

## **An Educating Experience**

Ealing College of Higher Education has a reputation acknowledged to be among the highest in the Public Sector. Situated in West London within easy reach of the countryside ECHE has an academic community of nearly 7 000 students. Courses offered at this specialist centre for Higher Education include

**CMAA POSTGRADUATE COURSES**

Chinese - Diploma

Contemporary German Studies -

MA/Diploma

English Studies (Materials & Methods) -

Diploma

Language in the Multiracial Community -

Diploma

Management Studies - Diploma

Manpower Studies - MA

Personnel Management - Diploma

**OTHER COURSES**

Accountancy - CACA, ICA, ICMA, ICSEA

qualifications

English - RSA Diplomas in TESL or TEFL

Library Studies

Secretarial Linguist Studies

Secretarial Management Studies

For further information on these courses contact

The Admissions Unit, Ealing College of Higher

Education, Room 126 St Mary's Road, Ealing

London W5 5RF

**LONDON**  
**ECHE**

## **Essex**

University of Essex Wivenhoe Park

Colchester CO4 3SQ

Telephone Colchester (0206) 867286

Further information Admissions Officer

---

## **Essex IHE**

Essex Institute of Higher Education Victoria

Road South Chelmsford CM1 1LL

Telephone Chelmsford (0245) 354491

Further information Associated Schools of

Education Sawyers Hall Lane Brentwood

Essex CM15 9BT

---

## **Exeter**

University of Exeter Northcote House The

Queen's Drive Exeter EX4 4QJ

Telephone Exeter (0397) 763263

Further information Secretary of Faculties

---

## **Exeter C**

Exeter College Hele Road Exeter EX4 4JS

Telephone Exeter (0397) 77977

Further information Head of Department of

Business Studies

---

## **Farnborough CT**

Farnborough College of Technology Boundary

Road Farnborough Hampshire GU14 6SB

Telephone Farnborough (0252) 515511

Further information Vice Principal

---

## **Garnett C**

Garnett College Downshire House

Rochampton Lane London SW15 4HR

Telephone 01 789 6513

Further information Principal

---

## ***Duncan of Jordanstone CA (Dundee)***

Duncan of Jordanstone College of Art, Perth  
Road, Dundee DD1 4HT  
Telephone: Dundee (0382) 23261  
Further information: Student Services Officer

---

## ***Dundee***

University of Dundee, Dundee DD1 4HN  
Telephone: Dundee (0382) 23181  
Further information: Secretary

---

## ***Dundee CT***

Dundee College of Technology, Bell Street,  
Dundee DD1 1HG  
Telephone: Dundee (0382) 27225  
Further information: Depute College Secretary

---

## ***Dunfermline CPE***

Dunfermline College of Physical Education,  
Cramond Road North, Edinburgh EH4 6JD  
Telephone: 031-336 6001  
Further information: Secretary

---

## ***Durham***

University of Durham, Old Shire Hall, Durham  
DH1 3HP  
Telephone: Durham (0385) 64466  
Further information: Registrar and Secretary

---

## ***Ealing CHE***

Ealing College of Higher Education, St Mary's  
Road, Ealing, London W5 5RF  
Telephone: 01-579 4111  
Further information: Admissions Unit (Room  
982)

---

---

# **University of Durham**

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Sciences

**Further information**  
The Registrar and Secretary  
University of Durham  
Old Shire Hall  
Durham DH1 3HP

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### **The colleges**

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## *East Anglia*

University of East Anglia Norwich NR4 7TJ  
Telephone Norwich (0603) 56161

Further information Registrar and Secretary

---

## *Edge Hill CHE (Ormskirk)*

Edge Hill College of Higher Education St  
Helens Road Ormskirk Lancashire L39 4QP  
Telephone Ormskirk (0695) 75171

Further information Senior Tutor

---

## *Edinburgh*

University of Edinburgh Secretary's Office  
Old College South Bridge Edinburgh  
EH8 9YL

Telephone 031-667 1011

Further information Secretary to the  
University

---

## **An Educating Experience**

Ealing College of Higher Education has a reputation acknowledged to be among the highest in the Public Sector. Situated in West London within easy reach of the countryside ECHE has an academic community of nearly 7 000 students. Courses offered at this specialist centre for Higher Education include:

### **CNAA POSTGRADUATE COURSES**

Chinese - Diploma

Contemporary German Studies -

MA/Diploma

English Studies (Materials & Methods) -

Diploma

Language in the Multiracial Community -

Diploma

Management Studies - Diploma

Manpower Studies - MA

Personnel Management - Diploma

### **OTHER COURSES**

Accountancy - CACA, ICA, ICMA, ICSA  
qualifications

English - RSA Diplomas in TESL or TEFL

Library Studies

Secretarial Linguist Studies

Secretarial Management Studies

For further information on these courses contact:  
The Admissions Unit, Ealing College of Higher  
Education, Room 126 St Mary's Road Ealing  
London W5 5RF

**LONDON**  
**ECHE** Ealing College of  
Higher Education

## *Essex*

University of Essex Wivenhoe Park  
Colchester CO4 3SQ

Telephone Colchester (0206) 862286

Further information Admissions Officer

---

## *Essex IHE*

Essex Institute of Higher Education Victoria  
Road South Chelmsford CM1 1LL  
Telephone Chelmsford (0245) 354491

Further information Associated Schools of  
Education Sawyers Hall Lane Brentwood  
Essex CM15 9BT

---

## *Exeter*

University of Exeter Northcote House The  
Queen's Drive Exeter EX4 4QJ  
Telephone Exeter (0392) 263263

Further information Secretary of Faculties

---

## *Exeter C*

Exeter College Hele Road Exeter EX4 4JS  
Telephone Exeter (0392) 77977

Further information Head of Department of  
Business Studies

---

## *Farnborough CT*

Farnborough College of Technology Boundary  
Road Farnborough Hampshire GU14 6SB  
Telephone Farnborough (0252) 515511

Further information Vice Principal

---

## *Garnett C*

Garnett College Downshire House  
Rochampton Lane London SW15 4HR  
Telephone 01 789 6533

Further information Principal

---

## ***Glasgow***

University of Glasgow, Glasgow G12 8QQ  
Telephone: 041-339 8855

Further information: Registrar

---

## ***Glasgow CT***

Glasgow College of Technology, Cowcaddens  
Road, Glasgow G4 0BA  
Telephone: 041-332 7090

Further information: Academic Registrar

---

## ***Glasgow SA***

Glasgow School of Art, 167 Renfrew Street,  
Glasgow G3 6RQ  
Telephone: 041-332 9797

Further information: Academic Registrar

---

## ***Gloucestershire CAT (Gloucester)***

Gloucestershire College of Arts and  
Technology, Oxstalls Lane, Gloucester  
GL2 9HW

Telephone: Gloucester(0452) 26321

Further information: Registrar

---

## ***Gwent CHE (Newport)***

Gwent College of Higher Education, Faculty of  
Management and Professional Studies, Allt-  
yr-yn Avenue, Newport, Gwent NP9 5XA  
Telephone: Newport (0633) 51525

Further information: Dean

---

## ***Harlow C***

Harlow College, College Gate, The High,  
Harlow, Essex CM20 1LT  
Telephone: Harlow (0279) 441288

Further information: Registrar

---

## ***Harper Adams AgC***

Harper Adams Agricultural College, Newport,  
Shropshire TF10 8NB

Telephone: Newport (0952) 811280

Further information: Academic Registrar

---

## ***Hatfield Poly***

Hatfield Polytechnic, PO Box 109, College  
Lane, Hatfield, Hertfordshire AL10 9AB  
Telephone: Hatfield (07072) 79000

Further information: Academic Registrar

---

## ***Heriot-Watt***

Heriot-Watt University, Edinburgh EH1 1HX  
Telephone: 031-225 8432

Further information: Deputy Registrar

---

## ***Hertfordshire CA & D***

Hertfordshire College of Art and Design,  
Hatfield Road, St Albans, Hertfordshire  
AL1 3RS

Telephone: St Albans (0727) 64414

Further information: Principal

---

## ***Hertfordshire CHE (Watford)***

Hertfordshire College of Higher Education,  
Wall Hall, Aldenham, Watford, Hertfordshire  
WD2 8AT

Telephone: Radlett (092 76) 2511

Further information: Registrar

---

## ***Huddersfield Poly***

The Polytechnic, Queensgate, Huddersfield  
HD1 3DH

Telephone: Huddersfield (0484) 22288

Further information: Dean of Research

---

## ***Hull***

University of Hull, Hull HU6 7RX  
Telephone: Hull (0482) 46311

Further information: Postgraduate Office

---

# THE UNIVERSITY OF HULL

## Postgraduate courses and research

The University offers supervision for research degrees (PhD MPhil MMus LLM MEd and MEng) in the following subject areas:

Accounting Adult Education American Studies Applied Mathematics Applied Physics Biochemistry Chemistry Classics Computer Studies Drama Economic and Social History Economics and Commerce Educational Studies Electronic Engineering Engineering Design and Manufacture English Estuarine and

## Postgraduate taught courses

The following courses are available to students seeking a qualification which may be obtained after one year's full time study:

MA

Adult Education Classical Civilisation Educational Studies English Language and Communication French

Seventeenth Century French Studies Social Work Studies Sociology of Developing Societies South East Asian Studies Theatre and Media Studies Theological Understanding of Industrial Society Victorian Literature Women and Literature

MSc

Analytical Science Health Administration and Research Industrial Applied Mathematics Industrial Mineralogy Industrial Psychology Micropalaeontology Management Sciences Occupational Psychology Philosophy of Science Stochastic Analysis

LLM

International Law

MMus

Analysis Composition Performance Musicology

MSc(Econ)

Economics Economics and Econometrics Labour Economics

BA(Ed) and MEd

A wide range of courses is available in the Department of Adult Education and Educational Studies.

Most of the courses mentioned above include the preparation of a dissertation of up to 20 000 words. Some of these courses are available on a part-time basis to students who live within reasonable travelling distance of the University.

Further information available from the Postgraduate Office, University of Hull, North Humberside HU6 7RX.  
Please specify the department or course which interests you.

## Overseas Student Bursaries

Overseas students applying to read for research degrees and who are liable to pay fees at the 'full cost' student rate may be eligible for a bursary of £1 000 pa.



### ***Humberside CHE (Hull)***

Humberside College of Higher Education,  
Cottingham Road, Hull HU6 7RT  
Telephone: Hull (0482) 41451

Further information: Admissions

---

### ***Keele***

University of Keele, Keele, Staffordshire  
ST5 5BG  
Telephone: Newcastle (Staffs) (0782) 621111

Further information: Registrar

---

### ***Kent***

University of Kent at Canterbury, Canterbury  
CT2 7NZ  
Telephone: Canterbury (0227) 66822

Further information: Registrar

---

### ***King Alfred's C (Winchester)***

King Alfred's College, Winchester SO22 4NR  
Telephone: Winchester (0962) 62281

Further information: Academic Registrar

---

### ***Kingston Poly***

Kingston Polytechnic, Penrhyn Road, Kingston  
upon Thames KT1 2EE  
Telephone: 01-549 1366

Further information: Academic Registrar

---

### ***Lancashire Poly***

Lancashire Polytechnic, Preston PR1 2TQ  
Telephone: Preston (0772) 22141

Further information: Educational Liaison  
Office

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Hull HU6 7BR (No stamp needed).  
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**HUMBERSIDE COLLEGE  
of Higher Education**

### **Lancaster**

University of Lancaster Lancaster LA1 4YW  
Telephone Lancaster (0524) 65201  
Further information Graduate Studies Officer

---

### **La Sainte Union CHE (Southampton)**

La Sainte Union College of Higher Education  
The Avenue Southampton SO9 5HB  
Telephone Southampton (0703) 228761  
Further information Co-ordinator of  
In Service Courses

---

### **Leeds**

University of Leeds Leeds LS2 9JT  
Telephone Leeds (0532) 431751  
Further information Registrar

---

### **Leeds Poly**

Leeds Polytechnic Silverley Street Leeds  
LS1 3HE  
Telephone Leeds (0532) 462903  
Further information Admissions Officer

---

### **Leicester**

University of Leicester University Road  
Leicester LE1 7RH  
Telephone Leicester (0533) 554455  
Further information Registrar (Higher  
Degrees)

---

### **Leicester Poly**

Leicester Polytechnic PO Box 143 Leicester  
LE1 9BH  
Telephone Leicester (0533) 551551  
Further information Academic Registrar

---



## **A CENTRE FOR POSTGRADUATE STUDY AND RESEARCH STUDY PROGRAMMES AVAILABLE IN.**

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Computer Aided Engineering  
Librarianship & Information Studies  
Marketing Management  
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Teacher Training in Art and  
Design Home Economics and  
Physical Education

### **Part-time**

Analytical Chemistry  
App Social Studies (CQSW)  
Architecture  
Clinical Pharmacy  
Computer Aided Engineering  
Environmental Planning  
Information Systems Eng  
Librarianship & Information Studies  
Management  
Welfare Law

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MPhil AND PhD (CNAa) FULL-TIME AND/OR PART-TIME IN MOST SUBJECTS  
FUNDING AVAILABLE IN SOME CASES

ENQUIRIES AND APPLICATIONS WELCOME TO THE ACADEMIC REGISTRY LIVERPOOL POLYTECHNIC,  
RODNEY HOUSE, 70 MOUNT PLEASANT LIVERPOOL L3 6UX Tel 051 2073581

### ***Lincoln CT***

Lincoln College of Technology, Cathedral Street, Lincoln LN2 5HQ  
Telephone: Lincoln (0522) 30641

Further information: Head of Department of Business and Management Studies

---

### ***Liverpool***

University of Liverpool, PO Box 147, Liverpool L69 3BX  
Telephone: 051-709 6022

Further information: Registrar

---

### ***Liverpool IHE***

Liverpool Institute of Higher Education, PO Box 6, Liverpool L16 9JD  
Telephone: 051-722 2361

Further information: Director of In-Service Education

---

### ***Liverpool Poly***

Liverpool Polytechnic, Rodney House, 70 Mount Pleasant, Liverpool L3 5UX  
Telephone: 051-207 3581

Further information: Admissions Officer

---

### ***London (Birkbeck)***

Birkbeck College, Malet Street, London WC1E 7HX  
Telephone: 01-580 6622

Further information: Registrar

---

### ***London (Cardiothoracic Inst)***

Cardiothoracic Institute, Brompton Hospital, London SW3 6HP  
Telephone: 01-352 8121

Further information: Secretary

---

### ***London (Courtauld Inst)***

Courtauld Institute of Art, 20 Portman Square, London W1H 0BE  
Telephone: 01-935 9292

Further information: Registrar

---

### ***London (Goldsmiths')***

University of London Goldsmiths' College, Lewisham Way, London SE14 6NW  
Telephone: 01-692 7171

Further information: Admissions Office

---

### ***London (Imperial)***

Imperial College of Science and Technology, London SW7 2AZ  
Telephone: 01-589 5111

Further information: Registrar

---

### ***London (Inst Archaeol)***

Institute of Archaeology, 31-4 Gordon Square, London WC1H 0PY  
Telephone: 01-387 6052

Further information: Registrar

---

### ***London (Inst Cancer Research)***

Institute of Cancer Research, 17A Onslow Garden, London SW7 3AL  
Telephone: 01-352 8133 (Secretary): 01-643 8901 (Dean)

Further information: Dean's Office, Institute of Cancer Research, Clifton Avenue, Sutton, Surrey SM2 5PX

---

### ***London (Inst Commonwealth Studies)***

Institute of Commonwealth Studies, 27 Russell Square, London WC1B 5DS  
Telephone: 01-580 5876

Further information: Assistant Secretary

---

### ***London (Inst Dermatology)***

Institute of Dermatology 5 Lisle Street  
Leicester Square London WC2H 9BJ  
Telephone 01-437 8383

Further information Dean

---

### ***London (Inst Ed)***

Institute of Education 20 Bedford Way  
London WC1H 0AL  
Telephone 01 636 1500

Further information Information Officer

---

### ***London (Inst Historical Research)***

Institute of Historical Research University of  
London Senate House London WC1E 7HU  
Telephone 01 636 0272

Further information Secretary and Librarian

---

### ***London (Inst Laryngology and Otolology)***

Institute of Laryngology and Otolology 330 2  
Gray's Inn Road London WC1X 8EE  
Telephone 01 837 8855

Further information Secretary

---

### ***London (Inst Latin American Studies)***

Institute of Latin American Studies 31  
Tavistock Square London WC1H 9HA  
Telephone 01 387 5671

Further information Assistant Secretary

---

### ***London (Inst Neurology)***

Institute of Neurology The National Hospital  
Queen Square London WC1N 3BG  
Telephone 01 837 3611

Further information Registrar

---

### ***London (Inst Obstetrics and Gynaecology)***

Institute of Obstetrics and Gynaecology  
Central Office Queen Charlotte's Maternity  
Hospital Goldhawk Road London W6 0XG  
Telephone 01 741 8351

Further information Academic Sub Dean

---

### ***London (Inst Ophthalmology)***

Institute of Ophthalmology Judd Street  
London WC1H 9QS  
Telephone 01 387 9621

Further information Dean

---

### ***London (Inst Orthopaedics)***

Institute of Orthopaedics Royal National  
Orthopaedic Hospital Brockley Hill  
Stanmore Middlesex HA7 4LP  
Telephone 01 954 2300

Further information Dean

---

### ***London (Inst Psychiatry)***

Institute of Psychiatry Maudsley Hospital  
Denmark Hill London SE5 8AF  
Telephone 01 703 5411

Further information Dean

---

### ***London (Inst US Studies)***

Institute of United States Studies 31 Tavistock  
Square London WC1H 9EZ  
Telephone 01 387 5534

Further information Administrative Officer

---

### ***London (Jews')***

Jews College Albert Road Hendon London  
NW4 2SJ  
Telephone 01 203 6427/8/9

Further information Executive Director

---

### ***London (KQC)***

King's College, London, Strand, London  
WC2R 2LS

Telephone: 01-836 5454

Further information: Admissions Office or  
appropriate departmental head

---

### ***London (LBS)***

London Business School, Sussex Place,  
Regent's Park, London NW1 4SA

Telephone: 01-262 5050

Further information: Registrar, Post Graduate  
Programmes

---

### ***London (LSE)***

London School of Economics and Political  
Science, Houghton Street, London WC2A 2AE

Telephone: 01-405 7686

Further information: Graduate Admissions  
Office

---

### ***London (LSH and TM)***

London School of Hygiene and Tropical  
Medicine, Keppel Street, London WC1E 7HT

Telephone: 01-636 8636

Further information: Registrar

---

### ***London (Pharmacy)***

School of Pharmacy, 29-39 Brunswick Square,  
London WC1N 1AX

Telephone: 01-837 7651

Further information: Registrar

---

### ***London (Queen Mary)***

Queen Mary College, Mile End Road, London  
E1 4NS

Telephone: 01-980 4811

Further information: Registrar

---

### ***London (RHBC)***

Royal Holloway and Bedford New College,  
Egham Hill, Egham, Surrey TW20 0EX

Telephone: Egham (0784) 34455

Further information: Registrar

---

### ***London (Royal Veterinary)***

Royal Veterinary College, Royal College  
Street, London NW1 0TU

Telephone: 01-387 2898

Further information: Registrar

---

### ***London (SOAS)***

School of Oriental and African Studies, Malet  
Street, London WC1E 7HP

Telephone: 01-637 2388

Further information: Registrar

---

### ***London (SSEES)***

School of Slavonic and East European Studies,  
Senate House, Malet Street, London

WC1E 7HU

Telephone: 01-637 4934

Further information: Registrar

---

### ***London (UC)***

University College, Gower Street, London  
WC1E 6BT

Telephone: 01-387 7050

Further information: Registrar

---

### ***London (Warburg)***

Warburg Institute, Woburn Square, London  
WC1H 0AB

Telephone: 01-580 9663

Further information: Secretary

---

### ***London (Westfield)***

Westfield College Kidderpore Avenue  
Hampstead London NW3 7ST  
Telephone 01-435 7141

Further information Registrar

---

### ***London (Wye)***

Wye College Wye Ashford Kent TN25 5AH  
Telephone Ashford (0233) 812401

Further information Registrar

---

### ***London (Charing Cross and Westminster)***

Charing Cross and Westminster Hospital  
Medical School Reynolds Building St  
Dunstan's Road London W6 8RP  
Telephone 01 748 2040

Further information Registrar

---

### ***London (Guy's & St Thomas')***

United Medical Schools of Guy's and St  
Thomas Hospitals London Bridge London  
SE1 9RT

Telephone 01 407 7600

Further information Secretary

---

### ***London (Middlesex)***

The Middlesex Hospital Medical School  
London W1P 7PN  
Telephone 01-636 8333

Further information Medical School Office

---

### ***London (Royal Free)***

Royal Free Hospital School of Medicine  
Rowland Hill Street London NW3 2PF  
Telephone 01 794 0500

Further information Registrar

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### ***London (St Bartholomew's)***

St Bartholomew's Hospital Medical College  
West Smithfield London EC1A 7BE  
Telephone 01 606 7404

Further information Registrar

---

### ***London (St George's)***

St George's Hospital Medical School Cranmer  
Terrace London SW17 0RE  
Telephone 01 672 1255

Further information Academic Registrar

---

### ***London (St Mary's)***

St Mary's Hospital Medical School Norfolk  
Place London W2 1PG  
Telephone 01 723 1252

Further information Secretary

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### ***London Bible College***

London Bible College Green Lane  
Northwood Middlesex HA6 2UW  
Telephone Northwood (092 74) 26061

Further information Academic Registrar

---

### ***London C Furniture***

London College of Furniture 41 Commercial  
Road London E1 1LA  
Telephone 01 247 1953

Further information Registrar

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### ***London C Printing***

London College of Printing Elephant and  
Castle London SE1 6SB  
Telephone 01 735 8484 9100

Further information Director of Higher  
Studies

---

## *Loughborough*

Loughborough University of Technology,  
Loughborough, Leicestershire LE11 3TU  
Telephone Loughborough (0509) 263171

Further information Academic Registrar  
(higher awards)

---

## *Luton CHE*

Luton College of Higher Education, Park  
Square, Luton LU1 3JU  
Telephone Luton (0582) 34111

Further information Chief Administrative  
Officer

---

## *Manchester*

University of Manchester, Manchester  
M13 9PL  
Telephone 061-273 3333

Further information Registrar

---

## *Manchester (UMIST)*

University of Manchester Institute of Science  
and Technology, PO Box 88, Manchester  
M60 1OD

Telephone 061-236 3311

Further information Registrar

---

## *Manchester Poly*

Manchester Polytechnic, All Saints,  
Manchester M15 6BH  
Telephone 061-228 6171

Further information Secretary or Head of  
Department

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## *Middlesex Poly*

Middlesex Polytechnic, Admissions Office, 114  
Chase Side, London N14 5PN  
Telephone 01-886 6599

Further information Admissions Office

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Advanced study at Manchester Polytechnic means not only working towards a higher degree or other postgraduate qualification by traditional methods, but may also involve enterprises of a more varied nature. Many undertakings concentrate upon liaison with outside bodies or involve planning design, consultancy or applied work in management, law, science, technology or other disciplines.

Many research projects are undertaken in specialist academic departments, but the polytechnic's Institute of Advanced Studies also has a vital role to play in the provision

of facilities for advanced study. The Institute is a research centre pooling expertise from all parts of the polytechnic and engaging in a variety of potentially useful research topics of the kind which do not fit neatly into conventional departments.

Polytechnic staff are always willing to advise anyone who might be interested in doing post-graduate work.

**Further details concerning individual courses are given in the full-time and sandwich, and part-time prospectuses available from the Academic Division, Manchester Polytechnic, All Saints Building, All Saints, Manchester M15 6BH.**

# **Manchester Polytechnic**

## **Mid-Kent CH & FE**

Further information Chief Administrative Officer

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## **Napier C (Edinburgh)**

Napier College Colinton Road Edinburgh EH10 5DT  
Telephone 031-447 7070

Further information Academic Registrar

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## **New C (Durham)**

New College Neville's Cross Centre Durham DH1 4SY  
Telephone Durham (0395) 47325

Further information Registrar

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## **Newcastle**

University of Newcastle upon Tyne Newcastle upon Tyne NE1 7RU

Telephone Newcastle (0632) 328511

Further information Registrar

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## **Newcastle Poly**

Newcastle upon Tyne Polytechnic Ellison Building Ellison Place Newcastle upon Tyne NE1 8ST

Telephone Newcastle (0632) 326002

Further information Academic Registrar

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## **Norfolk CA & T**

Norfolk College of Arts and Technology Tennyson Avenue King's Lynn PE30 2QW  
Telephone King's Lynn (0533) 61144

Further information Head of Department of Management and Business Studies

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# **UMIST**

## **POSTGRADUATE STUDIES AND RESEARCH**

Excellent facilities are available for research leading to the degrees of MSc and PhD in the following departments

biochemistry and applied molecular biology, building engineering, chemical engineering, chemistry, civil and structural engineering, computation control systems, corrosion and protection, electrical engineering and electronics, European studies, history of science and technology, instrumentation and analytical science, language and linguistics, management sciences, mathematics, mechanical engineering metallurgy and materials science, ophthalmic optics, paper science, pollution research, polymer science and technology, pure and applied physics, textiles. Facilities are also available for students wishing to undertake total technology projects

A wide variety of courses leading to the degree of MSc by examination and dissertation is also available

For further information about postgraduate courses and research, please write to

The Registrar, UMIST, PO Box 88, Manchester



## ***N Cheshire C***

North Cheshire College, Padgate Campus,  
Fearnhead, Warrington WA2 0DB  
Telephone: Padgate (0925) 814343

Further information: Admissions Tutor

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## ***NE London Poly***

North East London Polytechnic, 1: Barking  
Precinct, Longbridge Road, Dagenham, Essex  
RM6 2AS 2: West Ham Precinct, Romford  
Road, London E15 4LZ  
Telephone: 01-590 7722

Further information: Assistant Registrar

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## ***NE Wales IHE***

North East Wales Institute of Higher  
Education, Connah's Quay, Deeside, Clwyd  
CH5 4BR  
Telephone: Deeside (0244) 817531

Further information: Admissions Tutor

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## ***N Lindsey CT (Scunthorpe)***

North Lindsey College of Technology,  
Kingsway, Scunthorpe, South Humberside  
DN17 1AJ  
Telephone: Scunthorpe (0724) 855022

Further information: Principal

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## ***North Scotland CAG***

North of Scotland College of Agriculture,  
School of Agriculture, 581 King Street,  
Aberdeen AB9 1UD  
Telephone: Aberdeen (0224) 40291

Further information: Director of Studies

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## ***N Staffs Poly***

North Staffordshire Polytechnic, 1: Stoke-  
on-Trent, College Road, Stoke-on-Trent  
ST4 2DE 2: Stafford, Beaconside, Stafford  
ST18 0AD

Telephone: 1: Stoke-on-Trent (0782) 45531  
2: Stafford (0785) 52331

Further information: 1: Academic Registrar  
2: Academic Registrar

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## ***Norwich City CF & HE***

Norwich City College of Further and Higher  
Education, Ipswich Road, Norwich NR2 2LJ  
Telephone: Norwich (0603) 660011

Further information: Student Services Section

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## ***Nottingham***

University of Nottingham, University Park,  
Nottingham NG7 2RD  
Telephone: Nottingham (0602) 506101

Further information: Registrar

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## ***Open***

Open University, Walton Hall, PO Box 49,  
Milton Keynes MK7 6AD  
Telephone: Milton Keynes (0908) 74066

Further information: Higher Degrees Office

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## ***Oxford***

University of Oxford, Registrar and Graduate  
Admissions Office, University Offices,  
Wellington Square, Oxford OX1 2JD  
Telephone: Oxford (0865) 56747

Further information: Graduate Admissions  
Office

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## ***Oxford Poly***

Oxford Polytechnic, Headington, Oxford  
OX3 0BP  
Telephone: Oxford (0865) 64777

Further information: Academic Secretary

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### ***Paisley CT***

Paisley College of Technology High Street  
Paisley Renfrewshire PA1 2BE  
Telephone 041 887 1241

Further information Head of appropriate  
department

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### ***Plymouth Poly***

Plymouth Polytechnic Drake Circus Plymouth  
PL4 8AA  
Telephone Plymouth (0752) 21312

Further information Registrar

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### ***Poly of Central London***

Polytechnic of Central London 309 Regent  
Street London W1R 8AL  
Telephone 01-486 5811

Further information Academic Registrar

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### ***Poly of North London***

Polytechnic of North London Holloway Road  
London N7 8DB  
Telephone 01-407 2789

Further information Academic Registrar

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### ***Poly of Wales***

Polytechnic of Wales Pontypridd Glamorgan  
CF37 1DL  
Telephone Pontypridd (0443) 405133

Further information Registrar

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### ***Portsmouth Poly***

Portsmouth Polytechnic Museum Road  
Portsmouth PO1 2QQ  
Telephone Portsmouth (0705) 827681

Further information Assistant Registrar

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### ***Reading***

University of Reading Whiteknights Reading  
RG6 2AH  
Telephone Reading (0734) 875123

Further information Assistant Registrar  
(Postgraduate Office)

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### ***Robert Gordon's IT (Aberdeen)***

Robert Gordon's Institute of Technology  
Schoolhill Aberdeen AB9 1FR  
Telephone Aberdeen (0224) 633611

Further information Academic Registrar

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### ***Rochampton IHE***

Rochampton Institute of Higher Education  
Rochampton Lane London SW15 5PJ  
Telephone 01 878 5751

Further information Academic Registrar

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### ***Royal CA***

Royal College of Art Kensington Gore  
London SW7 2EU  
Telephone 01 584 5070

Further information Registrar

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### ***Royal Military CSc***

Royal Military College of Science Shrivenham  
Swindon Wiltshire SN6 8LA  
Telephone Swindon (0793) 762551

Further information Academic Registrar

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### ***Royal Naval EngC***

Royal Naval Engineering College Manadon  
Plymouth PL5 3AQ  
Telephone Plymouth (0752) 553740

Further information Academic Registrar

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### ***Royal NCM***

Royal Northern College of Music, 124 Oxford Road, Manchester M13 9RD  
Telephone: 061-273 6283

Further information: Secretary for Admissions

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### ***St Andrews***

University of St Andrews, St Andrews, Fife KY16 9AJ

Telephone: St Andrews (0334) 76161

Further information: Secretary

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### ***St Helens CT***

St Helens College of Technology, Water Street, St Helens, Merseyside WA10 1PZ

Telephone: St Helens (0744) 33766

Further information: Head of School of Management Studies

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### ***St Mark & St John C (Plymouth)***

College of St Mark and St John, Derriford Road, Plymouth PL6 8BH

Telephone: Plymouth (0752) 777188

Further information: Admissions Officer

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### ***S Martin's C (Lancaster)***

S Martin's College, Lancaster LA1 3JD

Telephone: Lancaster (0524) 63446

Further information: Registrar

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### ***St Martin's SA (London)***

St Martin's School of Art, 107-109 Charing Cross Road, London WC2H 0DU

Telephone: 01-437 0611

Further information: Senior Administrative Officer

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## **UNIVERSITY OF SALFORD**

We are situated two miles west of the centre of Manchester and ten miles from Manchester International Airport. Our professionally qualified graduates are employed worldwide.

We offer a good range of undergraduate and postgraduate programmes of study mainly in

### **SCIENCE AND ENGINEERING**

but also in Business & Administration, Finance & Accounting, Economics, Geography and Modern Languages.

**MSc/MA taught courses** (12 or 24 months) include Advanced Chemical Engineering, Applied Biology, Biochemistry, Business Studies, Chemistry (Analytical Chemistry; Applied Heterocyclic Chemistry; Radiochemistry, Radiation Chemistry & Nuclear Technology; Thermal Analysis), Computer Science, Economic Development, Electronic Control Engineering, Environmental Resources, Geography, International Studies, Public Sector Economics, Transport Engineering & Planning, Transport & Development, Linguistics, Teaching of Arabic as a Second Language, Translation (Arabic, French, Portuguese, Spanish).

**Research programmes** to MSc, MPhil and PhD are available in most departments. Preparatory and English language courses of 3, 6, 9 and 12 months' duration are offered in our Special Studies Unit.

University residential accommodation normally no problem.  
Student Welfare and Counselling Service.

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For further information write, giving brief details of your education and specifying the type of course and subject which interests you, to the Overseas Student Officer, Room 106/4, Registrar's Department, University of Salford, Salford M5 4WT, England.  
Telex No. 668680 G SULIB.

### **St Mary's C (Strawberry Hill)**

St Mary's College Strawberry Hill  
Twickenham TW1 4SX  
Telephone 01 892 0051

Further information Executive Vice Principal

---

### **St Paul & St Mary's C**

College of St Paul and St Mary The Park  
Cheltenham Gloucestershire GL50 2RH  
Telephone Cheltenham (0242) 513836

Further information Information and  
Appointments Officer

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### **Salford**

University of Salford Salford M5 4WT  
Telephone 061 736 5943

Further information Registrar

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### **Scottish C Textiles (Galashiels)**

Scottish College of Textiles Netherdale  
Galashiels TD1 3HF  
Telephone Galashiels (0896) 3351

Further information Academic Registrar

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### **Seale-Hayne C**

Seale Hayne College Newton Abbot Devon  
TQ12 6NQ  
Telephone Newton Abbot (0626) 2323

Further information Principal

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### **Sheffield**

University of Sheffield Western Bank  
Sheffield S10 2TN  
Telephone Sheffield (0742) 78555

Further information Head of appropriate  
department

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### **Sheffield City Poly**

Sheffield City Polytechnic Pond Street  
Sheffield S1 1WB  
Telephone Sheffield (0742) 20911

Further information Director of Student  
Services Centre

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### **Slough CHE**

Slough College of Higher Education  
Wellington Street Slough SL1 1YG  
Telephone Slough (0753) 34585

Further information Management Centre

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### **Southampton**

University of Southampton Highfield  
Southampton SO9 5NH  
Telephone Southampton (0703) 559122

Further information Academic Registrar

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#### **SCHILLER INTERNATIONAL UNIVERSITY**

*An American university in London, Paris,  
Madrid, Heidelberg and Strasbourg*

##### **MBA Master of Business Administration**

The 45 semester-credit programme leading to the  
Master's degree in Business Administration may be com-  
pleted in two semesters and one summer session at our  
London, Paris or Heidelberg study centres. This pro-  
gramme is also offered on a part-time evening basis at the  
London, Paris and Heidelberg centres.

##### **MBA Master of Business Administration in International Hotel and Tourism Management**

At our Paris study centre (2 semester's and 1 summer  
session)

##### **MIM Master of International Management in International Business**

At our Heidelberg study centre (2 semester's and 1  
summer session)

##### **MIM Master of International Management in Hotel and Tourism Management**

At our Waterloo study centre

##### **MA Master of Arts in Economics**

At our London study centre (2 semester's)

##### **MA Master of Arts in International Relations**

At our London and Paris study centres (2 semester's and 4  
summer sessions)

##### **Admission requirements**

For MBA - BBA or equivalent

For MIM or MA - BA in the subject of entry

Schiller International University Dept D24 51 Waterloo  
Road, London SE1 8TX, Telephone 01 928 8484  
Telex 8812438 SCOL

Accredited member AICS Washington DC USA

## **Southampton IHE**

Southampton Institute of Higher Education,  
East Park Terrace, Southampton SO9 4WW  
Telephone: Southampton (0703) 229381

Further information: Academic Registrar

## **South Bank Poly**

Polytechnic of the South Bank, Borough Road,  
London SE1 0AA  
Telephone: 01-928 8989

Further information: Central Registry

## **South Glamorgan IHE**

South Glamorgan Institute of Higher  
Education, Cyncoed Road, Cyncoed, Cardiff  
CF2 6XD  
Telephone: Cardiff (0222) 551111

Further information: Information Officer

## **Stirling**

University of Stirling, Stirling FK9 4LA  
Telephone: Stirling (0786) 3171

Further information: Registrar

## **Strathclyde**

University of Strathclyde, 204 George Street,  
Glasgow G1 1XW  
Telephone: 041-552 4400

Further information: Postgraduate Office

## **Suffolk CH & FE**

Suffolk College of Higher and Further  
Education, Rope Walk, Ipswich, Suffolk  
IP4 1LT

Telephone: Ipswich (0473) 55885

Further information: Registrar



# **The University of Stirling**

The University of Stirling was founded by Royal Charter in 1967. A completely new university set in a magnificent campus, it is situated in Central Scotland, 40 miles to Edinburgh and Glasgow, and with easy reach of the ski slopes and scenic beauty of the Scottish Highlands. The University campus has a comprehensive range of services and shops, a well equipped theatre, library, health centre and social facilities.

The University offers a wide range of postgraduate courses including those leading to Master's degrees (12 months full time, except where otherwise stated) and diploma courses (8 months).

**MASTER'S PROGRAMMES:** Accounting & Finance\* Applied Social Research, Aquaculture & Fishery Management\* Aquatic Pathobiology\* Aquatic Veterinary Studies\* Banking\* Business Administration\* Education\* Entrepreneurial Studies\* Finance\* Industrial Relations\* Industry in Developing Countries\* Information Technology\* Management Information Systems\* Marketing\* Modern Poetry in English\* Personnel Management & Industrial Relations\* Psychology\* Publishing Studies\* Retail Studies\*, Software Engineering, Technological Economics\*

**POSTGRADUATE DIPLOMA COURSES:** Housing Administration (2 years), Social Work (2 years), Accountancy (8 months), Professional Accountancy (8 months). All courses marked \* above include an 8 month diploma component.

**POSTGRADUATE CERTIFICATE COURSE** Religious Studies (12 months)

**RESEARCH (PhD, MSc):** Available in all University departments including Accountancy, Aquaculture, Biochemistry, Biology, Business Studies, Chemistry, Computing Science, Ecology, Economics, Education, English Studies, Environmental Science, Film and Media Studies, French, German, History, Information Technology, Management Science, Mathematics, Music, Philosophy, Physics, Political Studies, Religious Studies, Sociology, Spanish, Technological Economics.

**EDUCATION (BEDuc Studies):** 12 months plus 6 months part time study in student's country of origin or UK, for non-graduate teachers.

The postgraduate programme is supported by a full range of undergraduate programmes leading to a BA or BSc degree, and by a well equipped central library and full computing technical and AVA services.

### **CENTRE FOR ENGLISH LANGUAGE TEACHING**

Entrants who require language tuition may register for pre-entry courses at the University Centre for English Language Teaching. Diploma in TEFL (2 years) is also offered.

**ENQUIRIES ARE WELCOMED FROM HOME AND OVERSEAS STUDENTS.** For further information write to Professor J. Trainor.

Deputy Principal G662  
University of Stirling  
Stirling FK9 4LA  
Scotland, UK.

# TRENT POLYTECHNIC

*-The Key to your future*

Trent Polytechnic is one of the largest polytechnics with over 7000 full time and sandwich students and 3000 part time students. Of these around 810 are postgraduates.

The Polytechnic is situated right in the heart of England in the City of Nottingham - an attractive and lively city with first class sporting, cultural and recreational amenities. The Polytechnic is based on two sites - one in the city centre and the other on the outskirts of

these include:

students with priority given to those in their first year at the Polytechnic. An Accommodation Service also exists to help students find suitable accommodation elsewhere in the city.

Further information is available in our Postgraduate Courses and Research Facilities Prospectus, available from Ms G Blaikley Information Officer, Trent Polytechnic Burton Street Nottingham NG1 4BU Director Professor J O'Neill BSc (Eng) C Eng Telephone (0602) 415248 Telex 577534

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Trent Polytechnic Nottingham

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Nottingham Trent University Limited

## ***Sunderland Poly***

Sunderland Polytechnic, Langham Tower,  
Ryhope Road, Sunderland SR2 7EE  
Telephone: Sunderland (0783) 76231

Further information: Academic Registrar

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## ***Surrey***

University of Surrey, Guildford, Surrey  
GU2 5XH  
Telephone: Guildford (0483) 571281

Further information: Postgraduate Admissions  
Officer

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## ***Sussex***

University of Sussex, Admissions Office,  
Sussex House, Falmer, Brighton, Sussex  
BN1 9RH

Telephone: Brighton (0273) 606755

Further information: Admissions Office

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## ***Swindon C***

The College, Regent Circus, Swindon,  
Wiltshire SN1 1PT

Telephone: Swindon (0793) 40131

Further information: Vice Principal

---

## ***Teesside Poly***

Teesside Polytechnic, Borough Road,  
Middlesbrough, Cleveland TS1 3BA  
Telephone: Middlesbrough (0642) 218121

Further information: Registrar

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## ***James Poly***

James Polytechnic, Wellington Street,  
Woolwich, London SE18 6PF  
Telephone: 01-854 2030

Further information: Academic Registrar

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## ***Thurrock TC (Grays)***

Thurrock Technical College, Woodview,  
Grays, Essex RM16 4YR  
Telephone: Purfleet (0708) 863011

Further information: Dean of Department of  
Management and Business Studies

---

## ***Trent Poly***

Trent Polytechnic, Burton Street, Nottingham  
NG1 4BU

Telephone: Nottingham (0602) 418248

Further information: Academic Registrar

---

## ***Tresham C (Kettering and Corby)***

Tresham College, Kettering Centre, St Mary's  
Road, Kettering, Northamptonshire NN15 7BS  
Telephone: Kettering (0536) 85353

Further information: DMS Course Tutor

---

## ***Trinity C (Carmarthen)***

Trinity College, Carmarthen, Dyfed SA31 3EP  
Telephone: Carmarthen (0267) 237971

Further information: Registrar

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## ***Ulster***

University of Ulster, Coleraine, Northern  
Ireland BT52 1SA

Telephone: Coleraine (0265) 4141

Further information: Academic Registrar

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## ***Wales (Aberystwyth)***

The University College of Wales, Aberystwyth,  
Dyfed SY23 2AX

Telephone: Aberystwyth (0970) 3177

Further information: Registrar and Secretary

---

## Wales (Bangor)

University College of North Wales Bangor  
Gwynedd LL57 2DG  
Telephone Bangor (0248) 331151

Further information Registrar

## Wales (Lampeter)

Saint David's University College Lampeter  
Dyfed SA48 7ED  
Telephone Lampeter (0570) 422351

Further information Deputy Registrar

## Wales (Cardiff)

University College (at Cardiff) PO Box 78  
Cardiff CF1 1XL  
Telephone Cardiff (0222) 44211

Further information Registrar

## Wales (Swansea)

University College of Swansea Singleton Park  
Swansea Glamorgan SA2 8PP  
Telephone Swansea (0792) 295155

Further information Senior Assistant Registrar  
(Academic)

## Wales (C of Medicine)

University of Wales College of Medicine  
Heath Park Cardiff CF4 4XN  
Telephone Cardiff (0222) 755944

Further information Registrar and Secretary

## Wales (UWIST)

University of Wales Institute of Science and  
Technology PO Box No 68 Cardiff CF1 3XA  
Telephone Cardiff (0222) 425568

Further information Academic Registrar

## University College of Wales, Aberystwyth Graduate courses and research Research

The University College of Wales, Aberystwyth is a constituent college of the University of Wales and has excellent facilities for research leading to Master's degrees and Doctorate in the faculties of Arts, Science, Economics and Social Studies, Law, Music and Education.

### Graduate courses

Among the taught courses, which may include a short dissertation are:

Master's degree (University of Wales)

MA in Ancient Philosophy and Religion, Britain and America in the 19th Century, American Literature since 1840, Early British Seafarers, The Periodicals Press in Britain 1580-19, A MA in Visual Art

MSc in Agriculture, Economics, Agriculture and Food Marketing, Biological, Cellular Microscopy, Cell, and Molecular Genetics of Crop Plants, Chemistry, Improvement and Preservation of Grassland, Microphysiology, Plant Biochemistry, Plant Breeding, Plant Disease Management, Soil Science and Plant Performance, Symbolic, Kinship, Finance, Geography of Agriculture, and Forestry, Grassland, Microbiology, and Scientific Studies, MEd in Education, Technology, Building, and Language Education.

MBA Master's in Business Administration

Master's degree/University of Wales Diploma

Agriculture, Science, Agriculture, Economics, Statistics, Archive Administration, Computer Science, Scientific Studies

Master's degree/Course Diploma

Physics of the Atmosphere, Pure Mathematics

Course Diplomas

Accounting, Commerce, Law, Comparative Development Studies, Economics, Education, Technology, European Law and Government, International Law and Relations, Language in Education, Politics, Sociology, Visual Art, Public Management, Social Policy

### Intensive English language course for overseas students

For further information write to: The Registrar, University College of Wales, Aberystwyth, Dyfed, SA2 8PP, UK.  
Please quote reference HDO 1



## **Warwick**

University of Warwick, Coventry CV4 7AL  
Telephone: Coventry (0203) 523523

Further information: Academic Registrar

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## **Watford C**

Watford College, Hempstead Road, Watford,  
Hertfordshire WD1 3EZ

Telephone: Watford (0923) 41211

Further information: Registrar

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## **Welsh CM & D (Cardiff)**

Welsh College of Music and Drama, Castle  
Grounds, Cathays Park, Cardiff CF1 3ER  
Telephone: Cardiff (0222) 42854

Further information: Registrar

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## **West Glamorgan IHE (Swansea)**

West Glamorgan Institute of Higher Education,  
Higher Education Registry, Townhill Road,  
Swansea SA2 0UT

Telephone: Swansea (0792) 203482

Further information: Higher Education  
Registry

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## **West London IHE**

West London Institute of Higher Education,  
Gordon House, 300 St Margaret's Road,  
Twickenham, Middlesex TW1 1PT  
Telephone: 01-891 0121

Further information: Registrar

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## **West Midlands CHE (Walsall)**

West Midlands College of Higher Education,  
Gorway, Walsall, West Midlands WS1 3BD  
Telephone: Walsall (0922) 29141

Further information: Academic Registrar

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## **West Scotland AgC**

West of Scotland Agricultural College,  
Auchincruive, Ayr KA6 5HW  
Telephone: Annbank (0292) 520331

Further information: Deputy Principal

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## **West Sussex IHE (Bognor Regis)**

West Sussex Institute of Higher Education, The  
Dome, Upper Bognor Road, Bognor Regis,  
Sussex PO21 1HR

Telephone: Bognor Regis (0243) 865581

Further information: Registrar

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## **Wimbledon SA**

Wimbledon School of Art, Merton Hall Road,  
London SW19 3QA

Telephone: 01-540 0231

Further information: Registrar

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## **Wolverhampton Poly**

The Polytechnic, Wolverhampton, The  
Molineux, Molineux Street, Wolverhampton  
WV1 1SB

Telephone: Wolverhampton (0902) 710654

Further information: Academic Registrar

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## **Worcester CHE**

Worcester College of Higher Education,  
Henwick Grove, Worcester WR2 6AJ  
Telephone: Worcester (0905) 428080

Further information: Vice Principal

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## **Worcester TC**

Worcester Technical College, Deansway,  
Worcester WR1 2JF  
Telephone: Worcester (0905) 28383

Further information: Registrar

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## **York**

University of York, Heslington, York  
YO1 5DD

Telephone: York (0904) 59861

Further information: Graduate Office

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## **Index of subject headings**

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**Key:** 1 more or less  
 The part of an object or system that is  
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